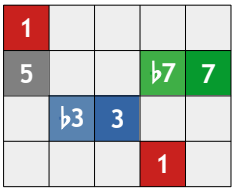
LinnStrument

Charts & Diagrams



Daniel Mura
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v.2.0
2024-03

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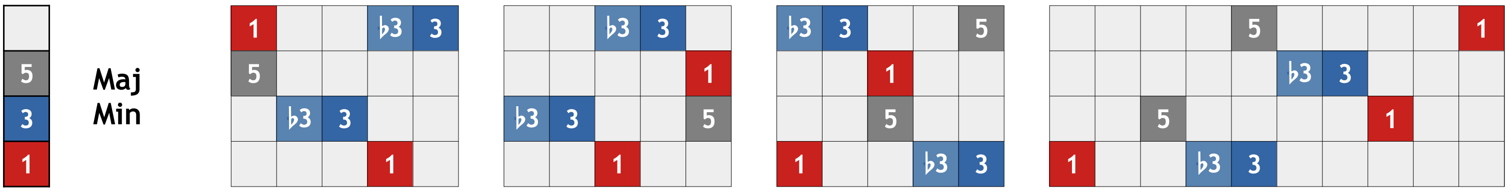
For more documents on ***Scales***, click here : [Docs, Charts & Diagrams [Google Drive]]

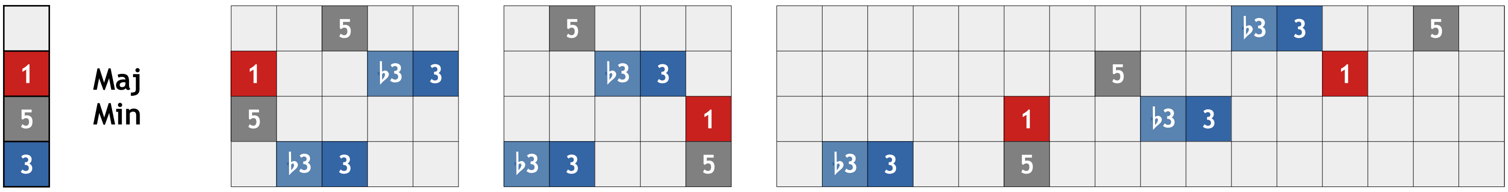
LinnStrument WEB Site :

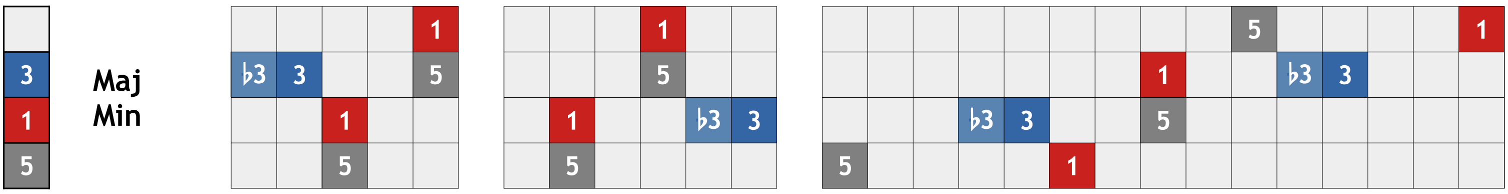
https://www.rogerlinndesign.com/

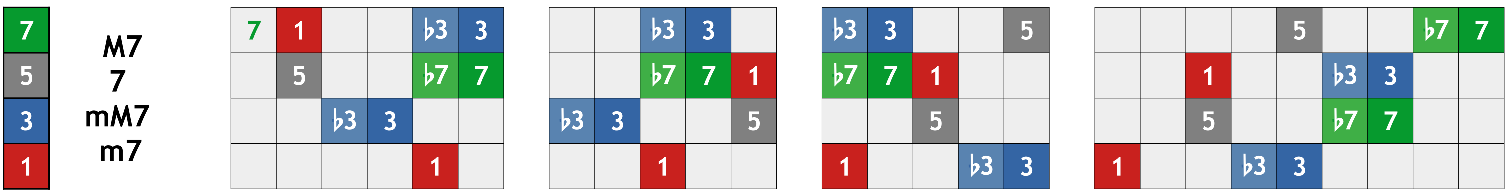
LinnStrument - Overview

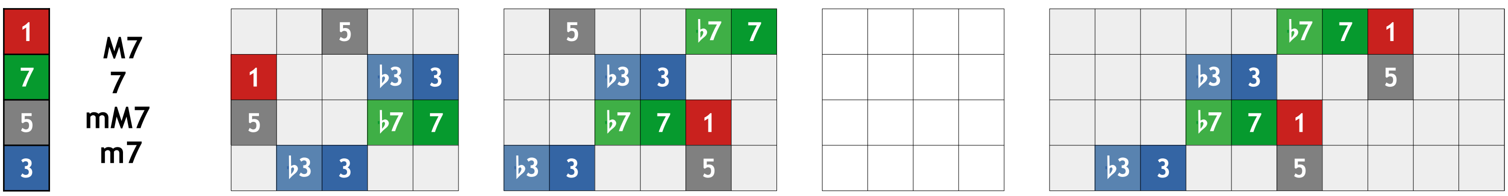
Arpeggios (Maj & Min)

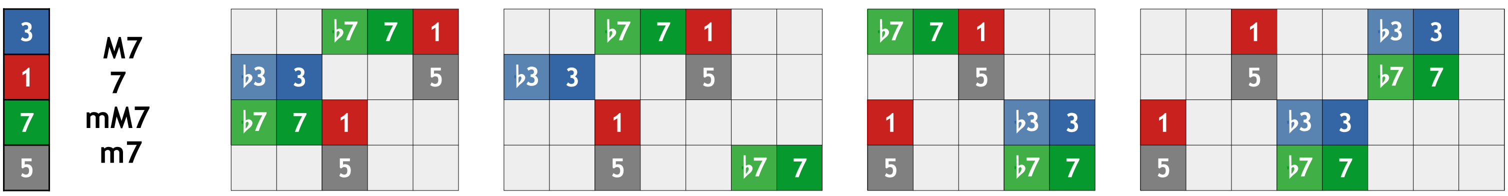


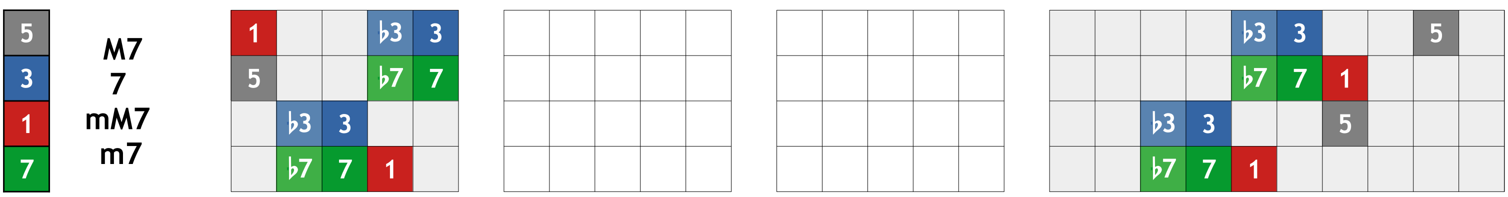






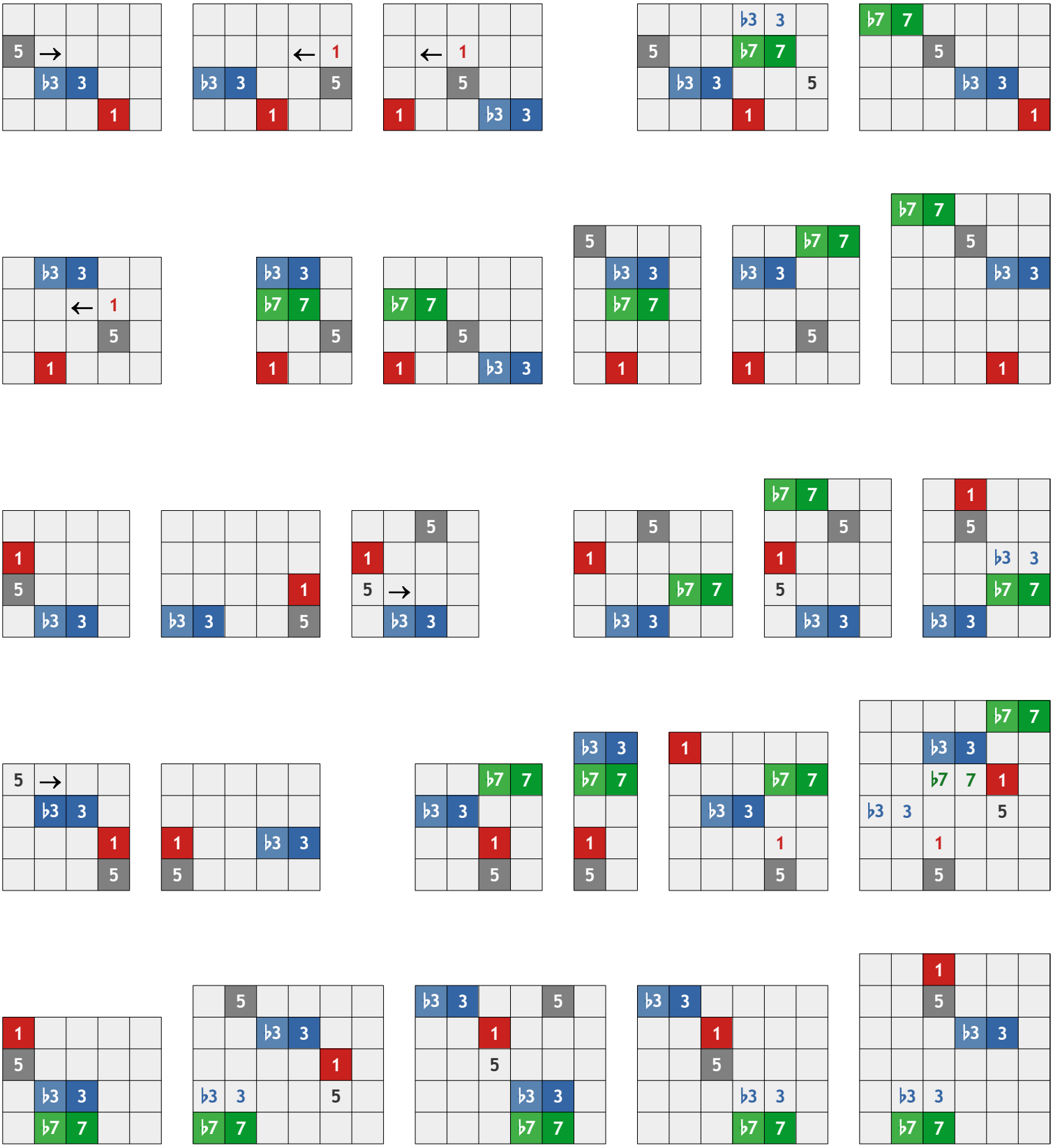






LinnStrument - Overview

Chords (Maj & Min)



LinnStrument - Overview

Triads

Maj
Min

5				
	♭3	3		
			1	

♭3	3			5
		1		

		5		
1			♭3	3

	♭3	3		
			1	
			5	
	1			

Maj
Min

1				
5				
	♭3	3		

				1
♭3	3			5

		5		
1				
	♭3	3		

	5			
		♭3	3	
				1
♭3	3			

Maj
Min

♭3	3			
		1		
		5		

1			♭3	3
5				

				1
♭3	3			5
		5		

		1		
		5		
			♭3	3
5				

♭7	7
♭3	3
1	

		♭3	3	
		♭7	7	1
♭3	3			
♭7	7	1		

1				
			♭7	7
	♭3	3		

		♭7	7	1
♭3	3			
♭7	7	1		
		5		

1			♭3	3
			♭7	7
	♭3	3		
	♭7	7	1	

7
3
1

			3	
			7	
	3			
		1		

1				
				7
		3		

			7	
	3			
		1		
		5		

	1			
				3
				7

♭7
3
1

			3	
		♭7		
	3			
		1		

1				
			♭7	
		3		

		♭7		
	3			
		1		
		5		

	1			
				3
		♭7		

♭7
♭3
1

		♭3		
		♭7		
♭3				
		1		

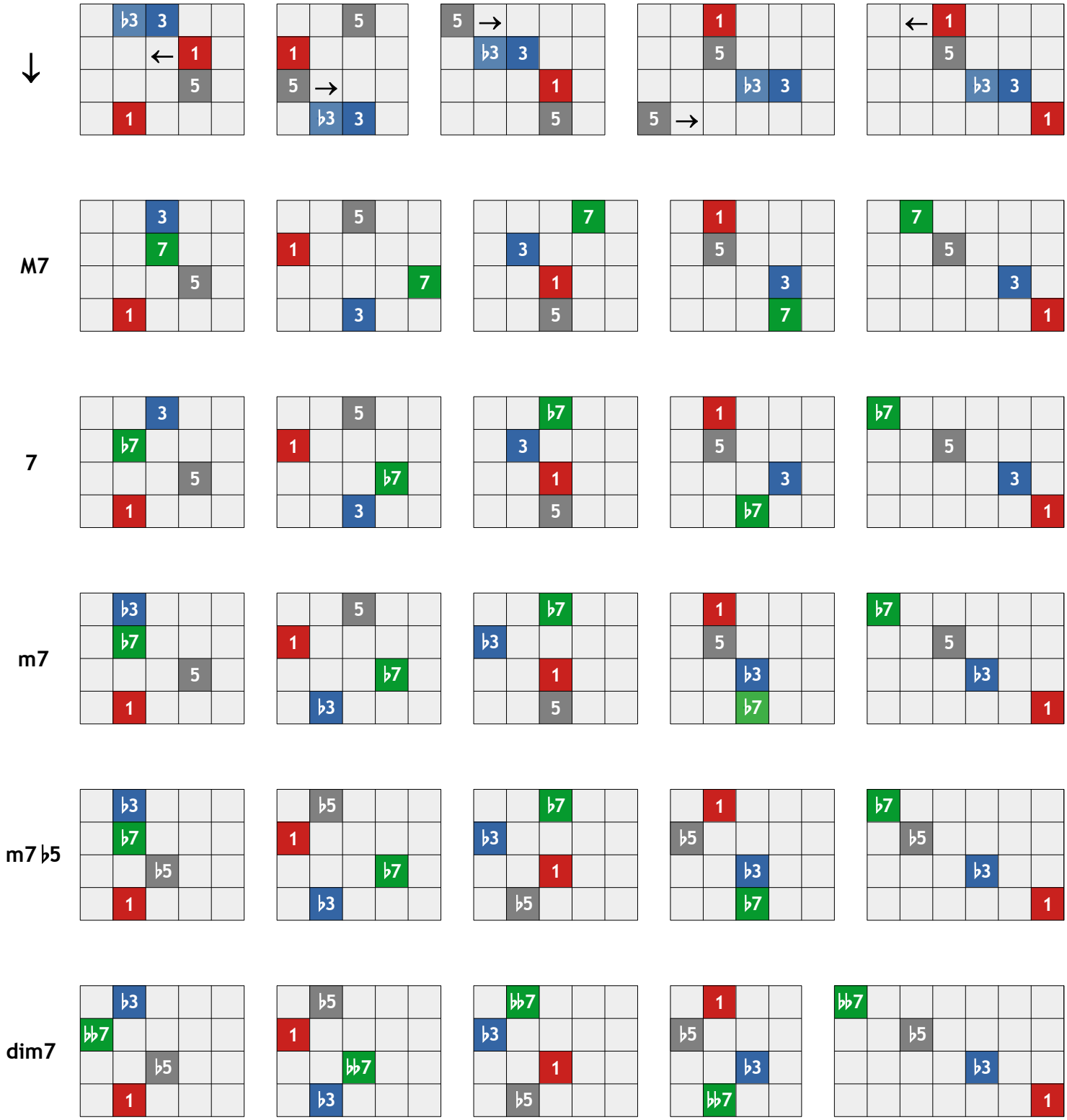
1				
			♭7	
	♭3			

		♭7		
♭3				
		1		
		5		

	1			
		♭3		
		♭7		

LinnStrument - Overview

Tetrads



LinnStrument - Overview

Triads & Tetrads [4x16 Grid]

Maj

1				3			5					1			
5					1				3			5			
		3			5					1				3	
			1				3			5					1

Min

1			♭3				5					1			♭3
5					1			♭3				5			
	♭3				5					1			♭3		
			1			♭3				5					1

M7

1				3			5				7	1			
5				7	1				3			5			
		3			5				7	1				3	
		7	1				3			5				7	1

mM7

1			♭3				5				7	1			♭3
5				7	1			♭3				5			
	♭3				5				7	1			♭3		
		7	1			♭3				5				7	1

7

1				3			5			♭7		1			
5			♭7		1				3			5			♭7
		3			5			♭7		1				3	
	♭7		1				3			5			♭7		1

m7

1			♭3				5			♭7		1			♭3
5			♭7		1			♭3				5			♭7
	♭3				5			♭7		1			♭3		
	♭7		1			♭3				5			♭7		1

Aug

1				3				♯5				1			
	♯5				1				3				♯5		
		3				♯5				1				3	
			1				3				♯5				1

Dim

1			♭3			♭5						1			♭3
					1			♭3			♭5				
	♭3			♭5						1			♭3		
			1			♭3			♭5						1

M7♯5

1				3				♯5			7	1			
	♯5			7	1				3				♯5		
		3				♯5			7	1				3	
		7	1				3				♯5			7	1

m7♭5

1			♭3			♭5				♭7		1			♭3
			♭7		1			♭3			♭5				♭7
	♭3			♭5				♭7		1			♭3		
	♭7		1			♭3			♭5				♭7		1

7♯5

1				3				♯5		♭7		1			
	♯5		♭7		1				3				♯5		♭7
		3				♯5		♭7		1				3	
	♭7		1				3				♯5		♭7		1

dim7

1			♭3			♭5			♭♭7			1			♭3
		♭♭7			1			♭3			♭5			♭♭7	
	♭3			♭5			♭♭7			1			♭3		
♭♭7			1			♭3			♭5			♭♭7			1

LinnStrument - Overview

Triads & Tetrads [8x8 Grid]

Maj

				1			
	3			5			
		1				3	
		5					1
1				3			5
5					1		
		3			5		
			1				3

7M

			7	1			
	3			5			
	7	1				3	
		5				7	1
1				3			5
5				7	1		
		3			5		
		7	1				3

7

		♭7		1			
	3			5			♭7
♭7		1				3	
		5			♭7		1
1				3			5
5			♭7		1		
		3			5		
	♭7		1				3

Min

				1			♭3
♭3				5			
		1			♭3		
		5					1
1			♭3				5
5					1		
	♭3				5		
			1			♭3	

mM7

			7	1			♭3
♭3				5			
	7	1			♭3		
		5				7	1
1			♭3				5
5				7	1		
	♭3				5		
		7	1			♭3	

m7

		♭7		1			♭3
♭3				5			♭7
♭7		1			♭3		
		5			♭7		1
1			♭3				5
5			♭7		1		
	♭3				5		
	♭7		1			♭3	

Dim

				1			♭3
♭3			♭5				
		1			♭3		
	♭5						1
1			♭3			♭5	
					1		
	♭3			♭5			
			1			♭3	

m7♭5

		♭7		1			♭3
♭3			♭5				♭7
♭7		1			♭3		
	♭5				♭7		1
1			♭3			♭5	
			♭7		1		
	♭3			♭5			
	♭7		1			♭3	

dim7

	♭♭7			1			♭3
♭3			♭5			♭♭7	
		1			♭3		
	♭5			♭♭7			1
1			♭3			♭5	
		♭♭7			1		
	♭3			♭5			♭♭7
♭♭7			1			♭3	

Aug

#5				1			
	3				#5		
		1				3	
			#5				1
1				3			
	#5				1		
		3				#5	
			1				3

7M♯5

#5			7	1			
	3				#5		
	7	1				3	
			#5			7	1
1				3			
	#5			7	1		
		3				#5	
		7	1				3

7♯5

#5		♭7		1			
	3				#5		♭7
♭7		1				3	
			#5		♭7		1
1				3			
	#5		♭7		1		
		3				#5	
	♭7		1				3

LinnStrument - Overview

Triads & Tetrads [8x16 Grid]

Maj

				1				3			5				
	3			5					1				3		
		1				3			5					1	
		5					1				3			5	
1				3			5					1			
5					1				3			5			
		3			5					1				3	
			1				3			5					1

Min

				1			♭3				5				
♭3				5					1			♭3			
		1			♭3				5					1	
		5					1			♭3				5	
1			♭3				5					1			♭3
5					1			♭3				5			
	♭3				5					1			♭3		
			1			♭3				5					1

M7

			7	1				3			5				7
	3			5				7	1				3		
	7	1				3			5				7	1	
		5				7	1				3			5	
1				3			5				7	1			
5				7	1				3			5			
		3			5				7	1				3	
		7	1				3			5				7	1

mM7

			7	1			♭3				5				7
♭3				5				7	1			♭3			
	7	1			♭3				5				7	1	
		5				7	1			♭3				5	
1			♭3				5				7	1			♭3
5				7	1			♭3				5			
	♭3				5				7	1			♭3		
		7	1			♭3				5				7	1

7

		♭7		1				3			5			♭7	
	3			5			♭7		1				3		
♭7		1				3			5			♭7		1	
		5			♭7		1				3			5	
1				3			5			♭7		1			
5			♭7		1				3			5			♭7
		3			5			♭7		1				3	
	♭7		1				3			5			♭7		1

m7

		♭7		1			♭3				5			♭7	
♭3				5			♭7		1			♭3			
♭7		1			♭3				5			♭7		1	
		5			♭7		1			♭3				5	
1			♭3				5			♭7		1			♭3
5			♭7		1			♭3				5			♭7
	♭3				5			♭7		1			♭3		
	♭7		1			♭3				5			♭7		1

LinnStrument - Overview

Triads & Tetrads [8x16 Grid]

Aug

♯5				1				3				♯5			
	3				♯5				1				3		
		1				3				♯5				1	
			♯5				1				3				♯5
1				3				♯5				1			
	♯5				1				3				♯5		
		3				♯5				1				3	
			1				3				♯5				1

Dim

				1			♭3			♭5					
♭3			♭5						1			♭3			♭5
		1			♭3			♭5						1	
	♭5						1			♭3			♭5		
1			♭3			♭5						1			♭3
					1			♭3			♭5				
	♭3			♭5						1			♭3		
			1			♭3			♭5						1

M7♯5

♯5			7	1				3				♯5			7
	3				♯5				1				3		
	7	1				3				♯5			7	1	
			♯5			7	1				3				♯5
1				3				♯5			7	1			
	♯5			7	1				3				♯5		
		3				♯5			7	1				3	
		7	1				3				♯5			7	1

m7♭5

		♭7		1			♭3			♭5				♭7	
♭3			♭5				♭7		1			♭3			♭5
♭7		1			♭3			♭5				♭7		1	
	♭5				♭7		1			♭3			♭5		
1			♭3			♭5				♭7		1			♭3
			♭7		1			♭3			♭5				♭7
	♭3			♭5				♭7		1			♭3		
	♭7		1			♭3			♭5				♭7		1

7♯5

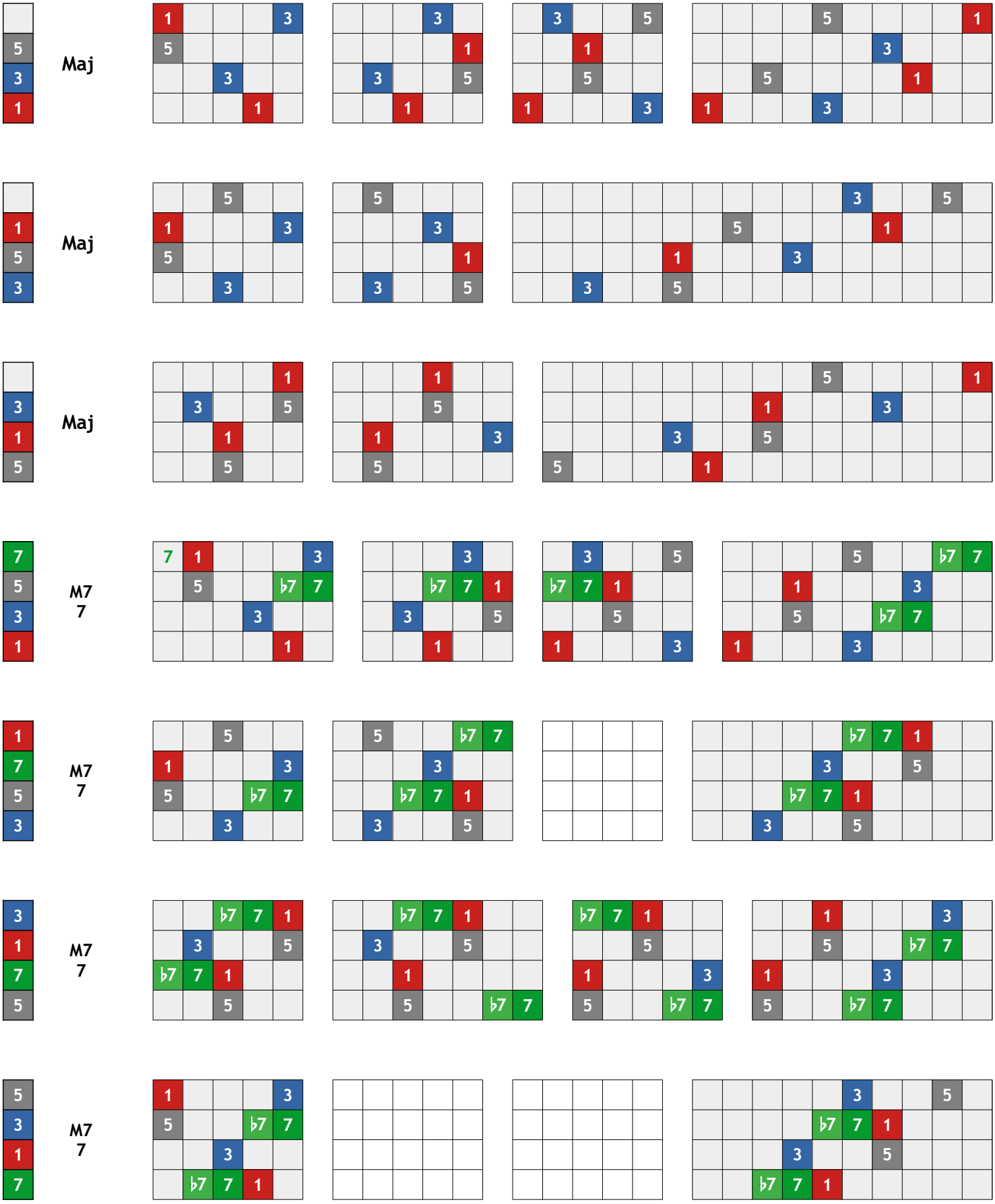
♯5		♭7		1				3				♯5		♭7	
	3				♯5		♭7		1				3		
♭7		1				3				♯5		♭7		1	
			♯5		♭7		1				3				5#
1				3				♯5		♭7		1			
	♯5		♭7		1				3				♯5		♭7
		3				♯5		♭7		1				3	
	♭7		1				3				♯5		♭7		1

dim7

	♭♭7			1			♭3			♭5			♭♭7		
♭3			♭5			♭♭7			1			♭3			♭5
		1			♭3			♭5			♭♭7			1	
	♭5			♭♭7			1			♭3			♭5		
1			♭3			♭5			♭♭7			1			♭3
		♭♭7			1			♭3			♭5			♭♭7	
	♭3			♭5			♭♭7			1			♭3		
♭♭7			1			♭3			♭5			♭♭7			1

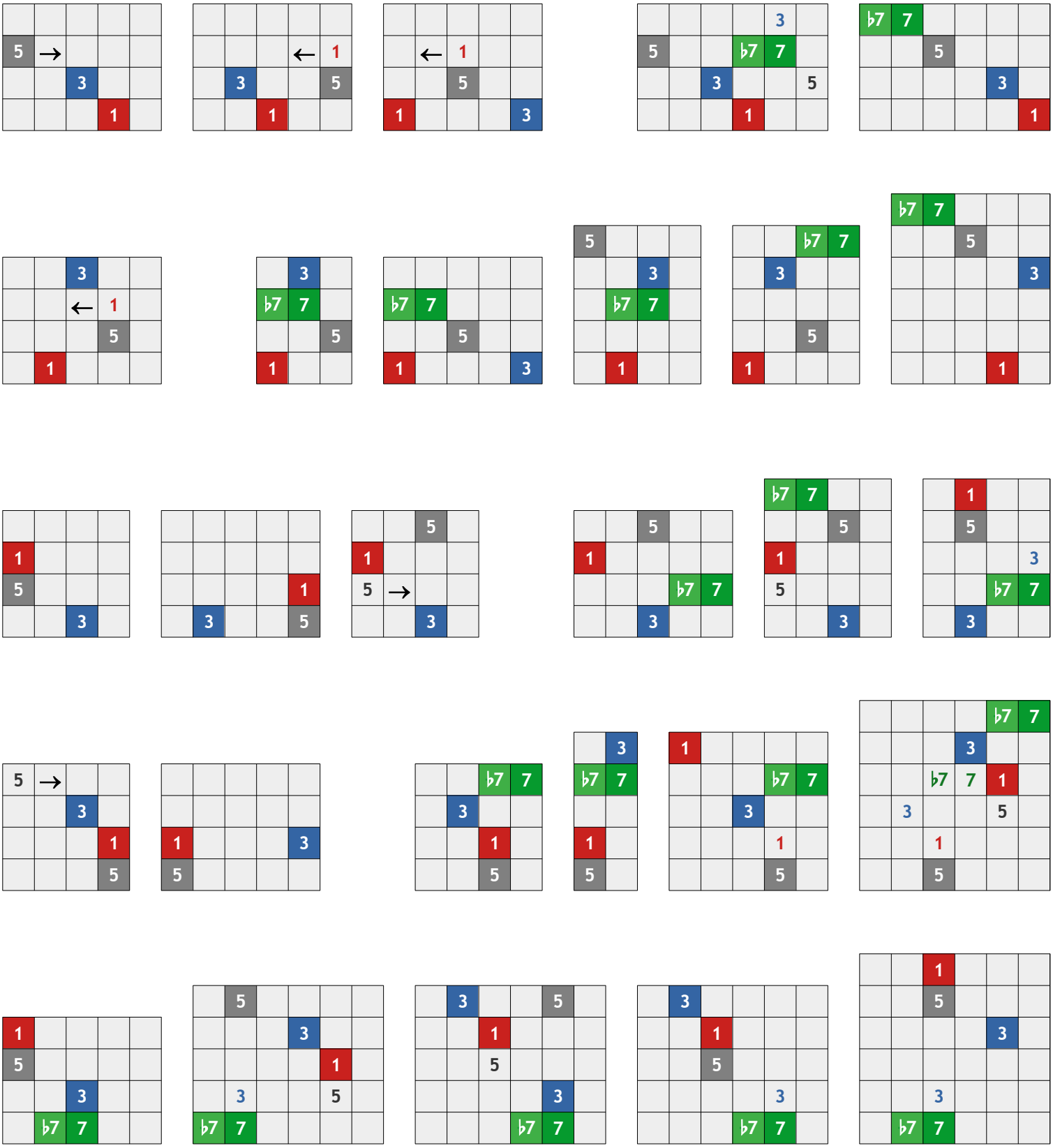
LinnStrument - Chords & Arpeggios

Arpeggios 1 (Maj - M7 - 7)



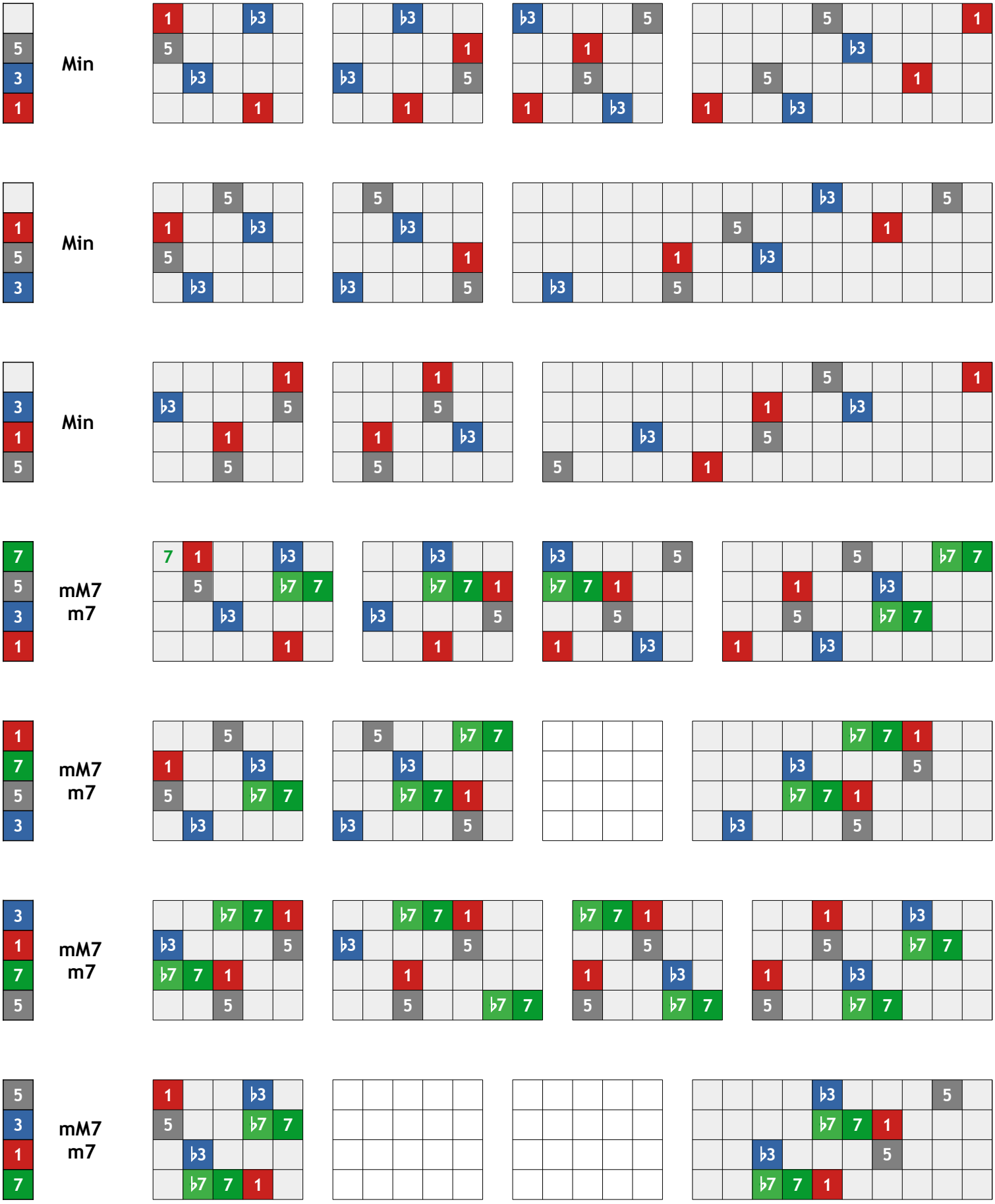
LinnStrument - Chords & Arpeggios

Chords 1 (Maj - M7 - 7)



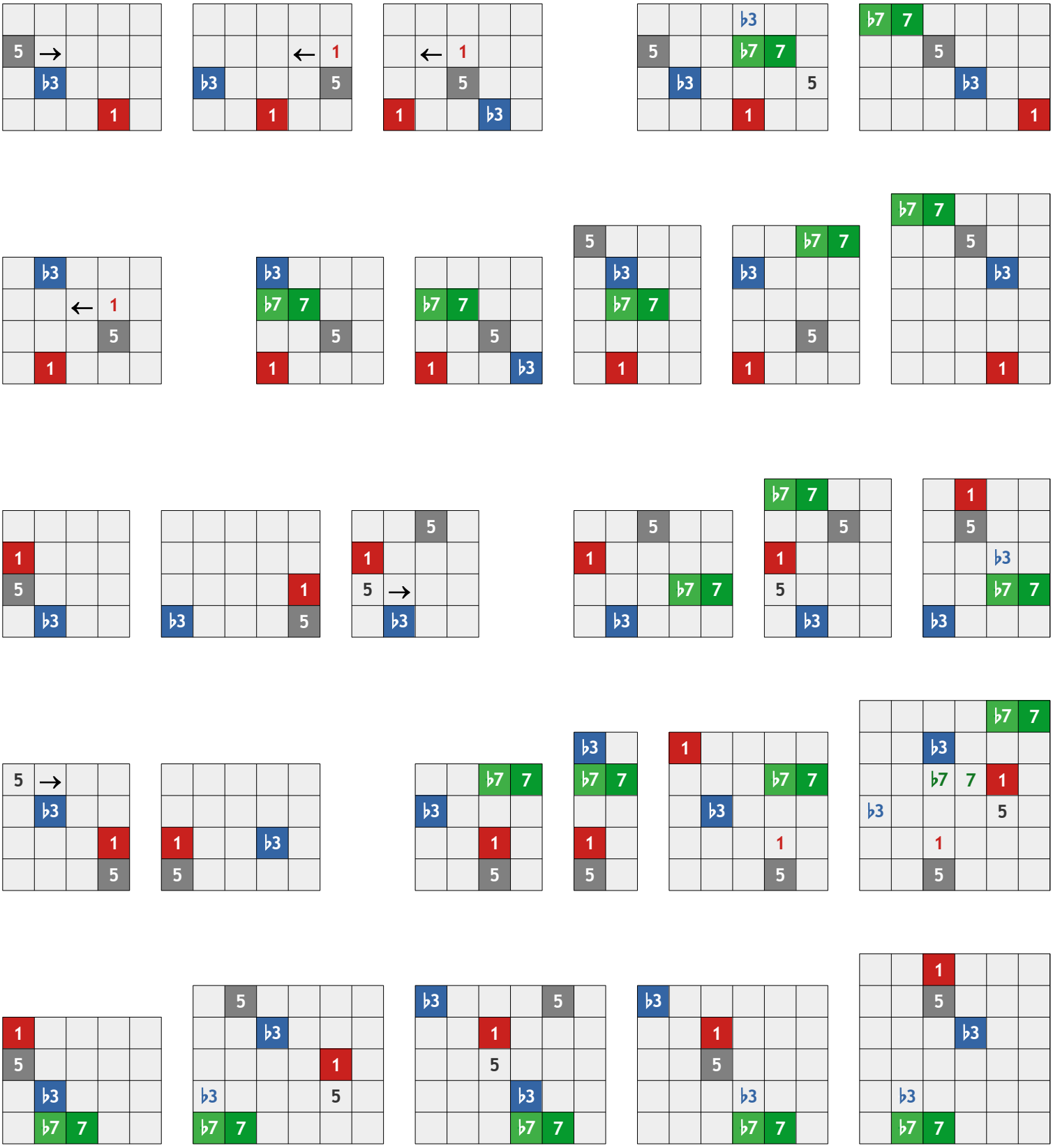
LinnStrument - Chords & Arpeggios

Arpeggios 2 (Min - mM7 - m7)



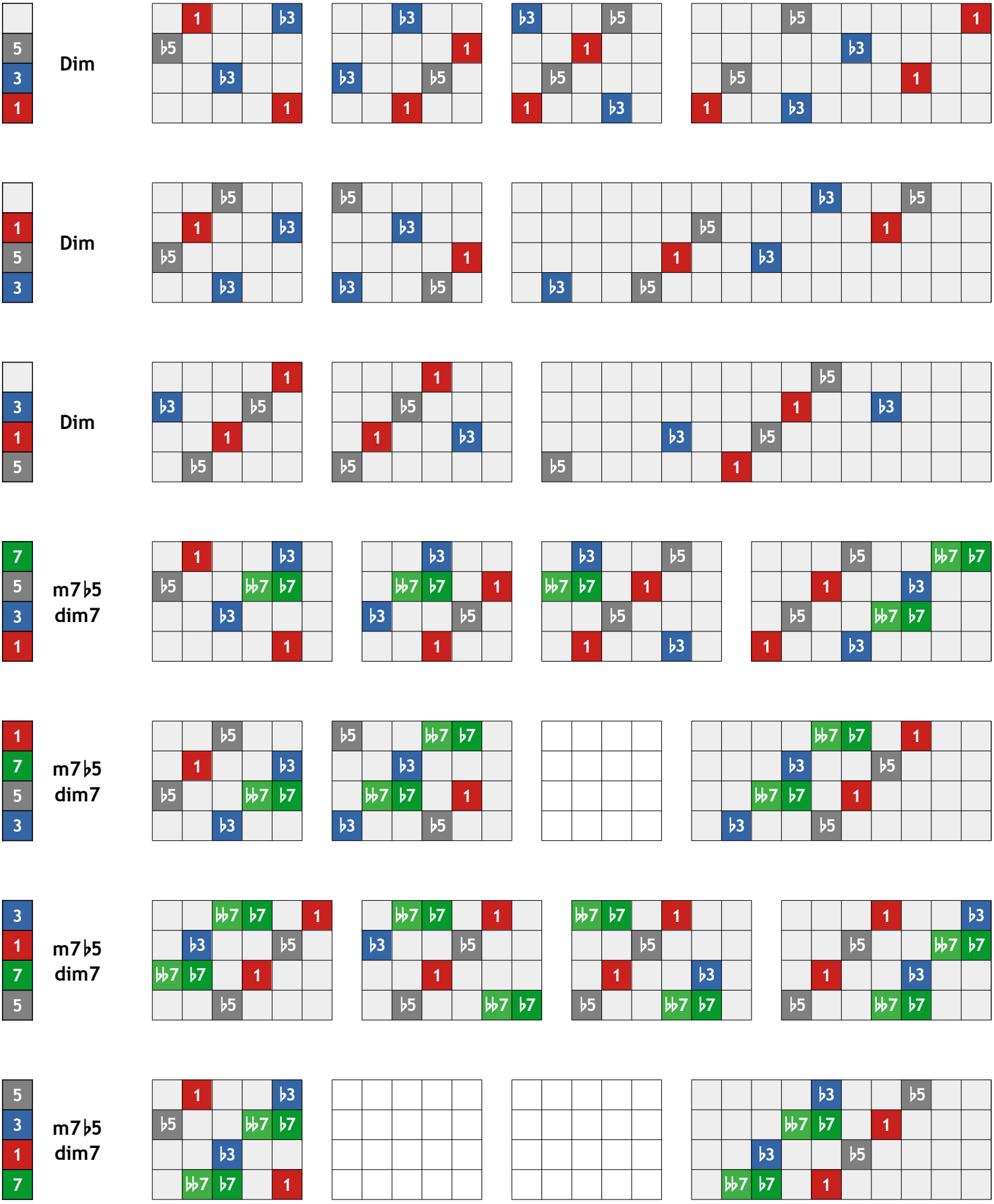
LinnStrument - Chords & Arpeggios

Chords 2 (Min - mM7 - m7)



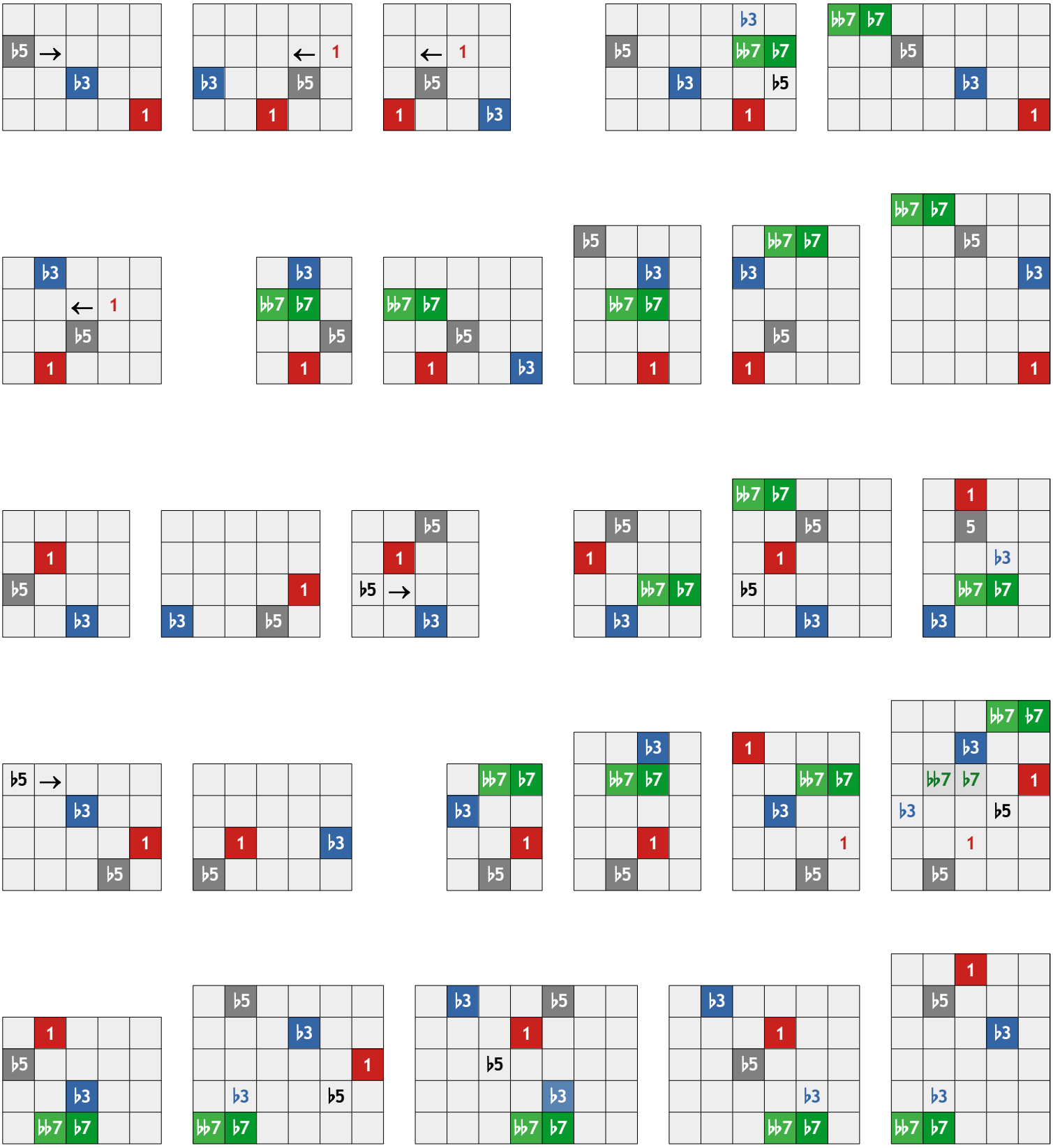
LinnStrument - Chords & Arpeggios

Arpeggios 3 (Dim - m7♭5 - dim7)



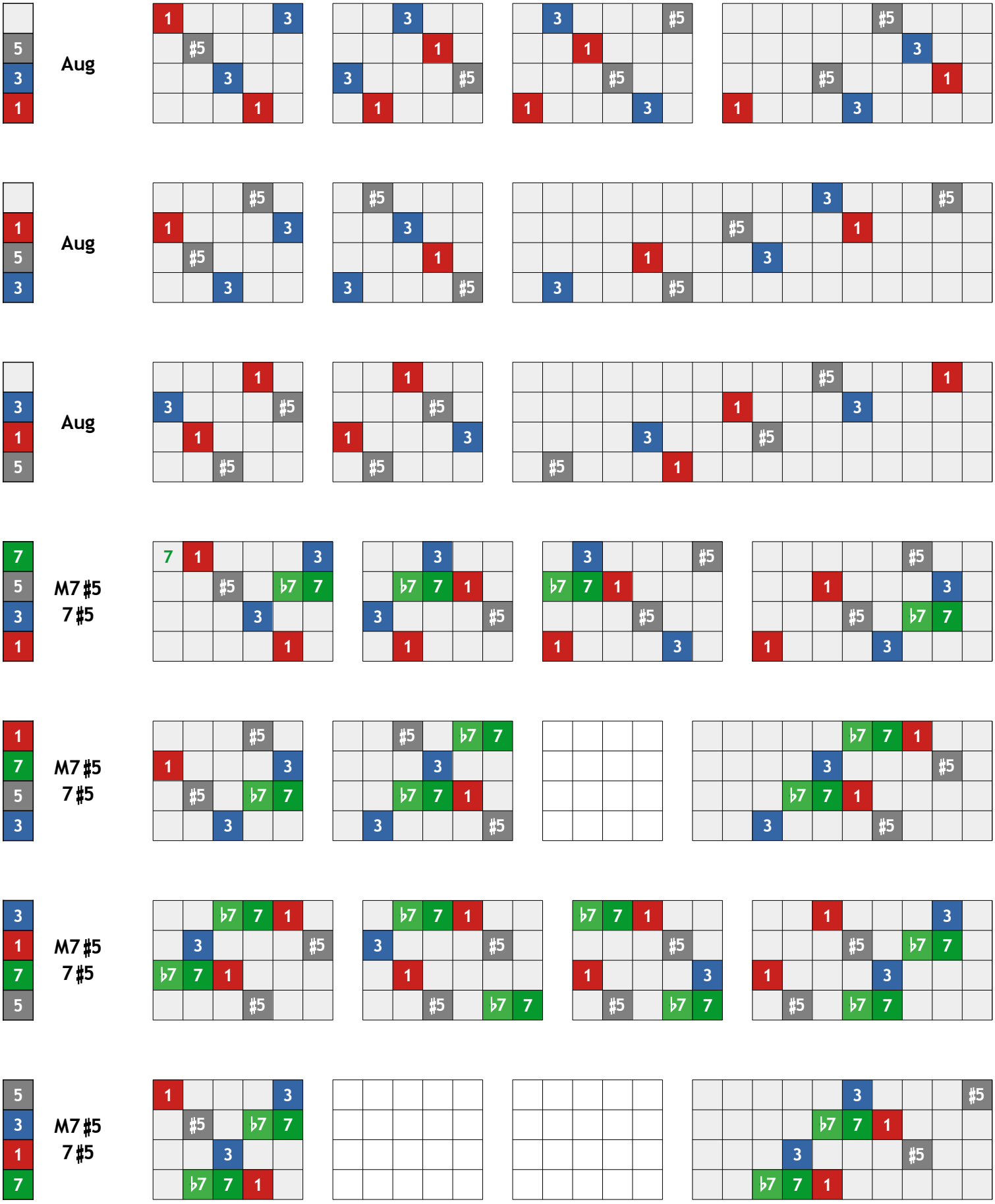
LinnStrument - Chords & Arpeggios

Chords 3 (Dim - m7♭5 - dim7)



LinnStrument - Chords & Arpeggios

Arpeggios 4 (Aug - M7♯5 - 7♯5)



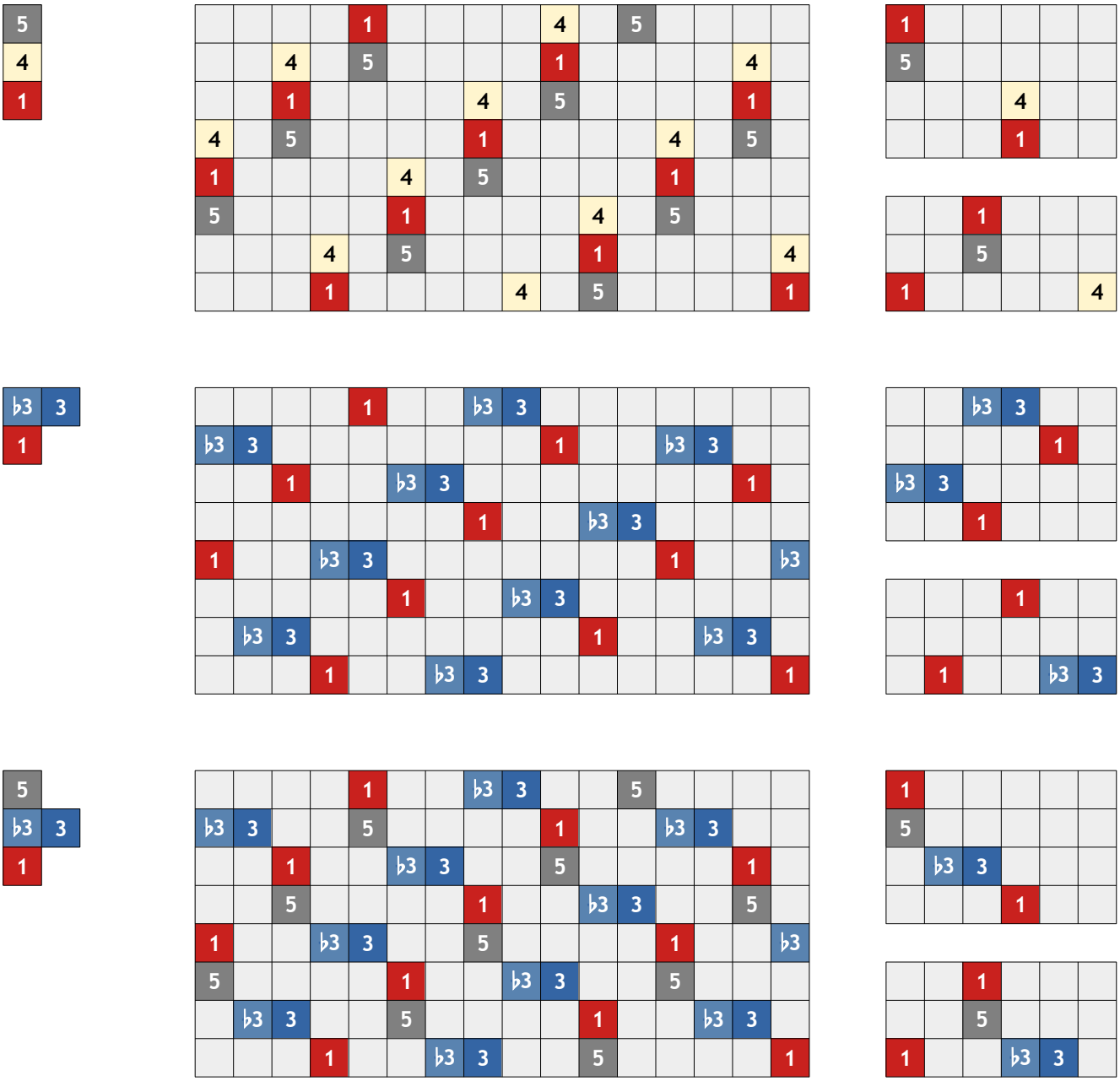
LinnStrument - Chords & Arpeggios

Chords 4 (Aug - M7♯5 - 7♯5)

LinnStrument - Intervals

1	♭2	2	♯2 ♭3	3	4	♯4 ♭5	5	♯5 ♭6	6	♯6 ♭7	7	1
			♯2		♯3	♯4		♯5		♯6		
1		2		3	4		5		6		7	1
	♭2		♭3	♭4		♭5		♭6		♭7		
		♭♭3					♭♭6		♭♭7			
	♭9	9	♯9		11	♯11		♭13	13			

Complementary Intervals												
	♭2		2		♭3		3		4		♯4	
	7		♭7		6		♭6		5		♭5	



LinnStrument - Intervals

♭7	7
♭3	3
1	

		♭7	7	1			♭3	3						♭7	7
♭3	3						♭7	7	1			♭3	3		
♭7	7	1			♭3	3						♭7	7	1	
					♭7	7	1			♭3	3				
1			♭3	3						♭7	7	1			♭3
			♭7	7	1			♭3	3						♭7
	♭3	3						♭7	7	1			♭3	3	
	♭7	7	1			♭3	3						♭7	7	1

		♭3	3		
		♭7	7	1	
♭3	3				
		1			

	♭7	7	1		
	1			♭3	3

♭9	9
♭7	7
♭3	3
1	

		♭7	7	1	♭9	9	♭3	3						♭7	7
♭3	3						♭7	7	1	♭9	9	♭3	3		
♭7	7	1	♭9	9	♭3	3						♭7	7	1	
					♭7	7	1	♭9	9	♭3	3				
1	♭9	9	♭3	3						♭7	7	1	♭9	9	♭3
			♭7	7	1			♭3	3						♭7
	♭3	3						♭7	7	1			♭3	3	
	♭7	7	1			♭3	3						♭7	7	1

♭9	9	♭3	3		
		♭7	7	1	
♭3	3				
		1			

11	#11
♭7	7
♭3	3
1	

		♭7	7	1			♭3	3	11	#11				♭7	7
♭3	3	11	#11				♭7	7	1			♭3	3	11	#11
♭7	7	1			♭3	3	11	#11				♭7	7	1	
11	#11				♭7	7	1			♭3	3	11	#11		
1			♭3	3	11	#11				♭7	7	1			♭3
			♭7	7	1			♭3	3						♭7
	♭3	3						♭7	7	1			♭3	3	
	♭7	7	1			♭3	3						♭7	7	1

		♭3	3	11	#11
		♭7	7	1	
♭3	3				
		1			

♭13	13
♭7	7
♭3	3
1	

♭13	13	♭7	7	1			♭3	3				♭13	13	♭7	7
♭3	3				♭13	13	♭7	7	1			♭3	3		
♭7	7	1			♭3	3				♭13	13	♭7	7	1	
			♭13	13	♭7	7	1			♭3	3				
1			♭3	3				♭13	13	♭7	7	1			♭3
			♭7	7	1			♭3	3						♭7
	♭3	3						♭7	7	1			♭3	3	
	♭7	7	1			♭3	3						♭7	7	1

		♭13	13		
		♭3	3		
♭13	13	♭7	7	1	
♭3	3				
		1			

LinnStrument - Voicings

II - V - I - IV (Triads)

II Min

		1			♭3				5					1			♭3		
		5					1			♭3				5					1
1			♭3				5					1			♭3				5
5					1			♭3				5					1		

V 7

		5			♭7		1				3			5			♭7		1
1				3			5			♭7		1				3			5
5			♭7		1				3			5			♭7		1		
		3			5			♭7		1				3			5		

I Maj

1				3			5					1				3			5
5					1				3			5					1		
		3			5					1				3			5		
			1				3			5					1				3

IV Maj

5					1				3			5					1		
		3			5					1				3			5		
			1				3			5					1				3
3			5					1				3			5				

Resolutions

V	(I)	I
3	7	♭7
1	5	5
♭7	4	3
5	2	1

V	(I)	I
5	2	1
3	7	♭7
1	5	5
♭7	4	3

V	(I)	I
♭7	4	3
5	2	1
3	7	♭7
1	5	5

V	(I)	I
1	5	5
♭7	4	3
5	2	1
3	7	♭7

V	(I)	I
♭7	4	3
3	7	1

LinnStrument - Voicings

II - V - I - IV (Triads)

II Min

		1			♭3				5					1			♭3		
		5					1			♭3				5					1
1			♭3				5					1			♭3				5
5					1			♭3				5					1		

V 7

		5			♭7		1				3			5			♭7		1
1				3			5			♭7		1				3			5
5			♭7		1				3			5			♭7		1		
		3			5			♭7		1				3			5		

I Min

1			♭3				5					1			♭3				5
5					1			♭3				5					1		
	♭3				5					1			♭3				5		
			1			♭3				5					1			♭3	

IV Min

5					1			♭3				5					1		
	♭3				5					1			♭3				5		
			1			♭3				5					1			♭3	
			5					1			♭3				5				

Resolutions

V	(I)	I
3	7	7
1	5	5
♭7	4	♭3
5	2	1

V	(I)	I
5	2	1
3	7	7
1	5	5
♭7	4	♭3

V	(I)	I
♭7	4	♭3
5	2	1
3	7	7
1	5	5

V	(I)	I
1	5	5
♭7	4	♭3
5	2	1
3	7	7

V	(I)	I
♭7	4	♭3
3	7	1

LinnStrument - Voicings

II - V - I - IV (Tetrads)

II m7

♭7		1			♭3				5			♭7		1			♭3		
		5			♭7		1			♭3				5			♭7		1
1			♭3				5			♭7		1			♭3				5
5			♭7		1			♭3				5			♭7		1		

V 7

		5			♭7		1				3			5			♭7		1
1				3			5			♭7		1				3			5
5			♭7		1				3			5			♭7		1		
		3			5			♭7		1				3			5		

I 7M

1				3			5				7	1				3			5
5				7	1				3			5				7	1		
		3			5				7	1				3			5		
		7	1				3			5				7	1				3

IV M7
IV mM7

5				7	1			♭3	3			5				7	1		
	♭3	3			5				7	1			♭3	3			5		
		7	1			♭3	3			5				7	1			♭3	3
3			5				7	1			♭3	3			5				7

Alternatives

II m7♭5

♭7		1			♭3			♭5				♭7		1			♭3		
	♭5				♭7		1			♭3			♭5				♭7		1
1			♭3			♭5				♭7		1			♭3			♭5	
			♭7		1			♭3			♭5				♭7		1		

V 7♭5

	♭5				♭7		1				3		♭5				♭7		1
1				3		♭5				♭7		1				3		♭5	
			♭7		1				3		♭5				♭7		1		
		3		♭5				♭7		1				3		♭5			

LinnStrument - Voicings

II - V - I - IV (Tetrads)

II m7

♭7		1			♭3				5			♭7		1			♭3		
		5			♭7		1			♭3				5			♭7		1
1			♭3				5			♭7		1			♭3				5
5			♭7		1			♭3				5			♭7		1		

V 7

		5			♭7		1				3			5			♭7		1
1				3			5			♭7		1				3			5
5			♭7		1				3			5			♭7		1		
		3			5			♭7		1				3			5		

I mM7

1			♭3				5				7	1			♭3				5
5				7	1			♭3				5				7	1		
	♭3				5				7	1			♭3				5		
		7	1			♭3				5				7	1			♭3	

IV m7
IV 7

5			♭7		1			♭3	3			5			♭7		1		
	♭3	3			5			♭7		1			♭3	3			5		
	♭7		1			♭3	3			5			♭7		1			♭3	3
3			5			♭7		1			♭3	3			5			♭7	

Alternatives

II m7♭5

♭7		1			♭3			♭5				♭7		1			♭3		
	♭5				♭7		1			♭3			♭5				♭7		1
1			♭3			♭5				♭7		1			♭3			♭5	
			♭7		1			♭3			♭5				♭7		1		

V 7♭5

	♭5				♭7		1				3		♭5				♭7		1
1				3		♭5				♭7		1				3		♭5	
			♭7		1				3		♭5				♭7		1		
		3		♭5				♭7		1				3		♭5			

LinnStrument - Voicings

VII - III - VI - II - V - I - IV (Diatonic major scale)

VII m7♭5
Locrian

		♭3			♭5				♭7		1			♭3			♭5		
		♭7		1			♭3			♭5				♭7		1			♭3
♭3			♭5				♭7		1			♭3			♭5				♭7
♭7		1			♭3			♭5				♭7		1			♭3		

III m7
Phrygian

		♭7		1			♭3				5			♭7		1			♭3
♭3				5			♭7		1			♭3				5			♭7
♭7		1			♭3				5			♭7		1			♭3		
		5			♭7		1			♭3				5			♭7		1

VI m7
Aeolian

♭3				5			♭7		1			♭3				5			♭7
♭7		1			♭3				5			♭7		1			♭3		
		5			♭7		1			♭3				5			♭7		1
1			♭3				5			♭7		1			♭3				5

II m7
Dorian

♭7		1			♭3				5			♭7		1			♭3		
		5			♭7		1			♭3				5			♭7		1
1			♭3				5			♭7		1			♭3				5
5			♭7		1			♭3				5			♭7		1		

V 7
Mixolydian

		5			♭7		1				3			5			♭7		1
1				3			5			♭7		1				3			5
5			♭7		1				3			5			♭7		1		
		3			5			♭7		1				3			5		

I M7
Ionian

1				3			5				7	1				3			5
5				7	1				3			5				7	1		
		3			5				7	1				3			5		
		7	1				3			5				7	1				3

IV M7
Lydian

5				7	1				3			5				7	1		
		3			5				7	1				3			5		
		7	1				3			5				7	1				3
3			5				7	1				3			5				7

LinnStrument – Chord progressions (Cadences)

Chord progressions (Circle of Fifths/ Forths)

Melodic major (Diatonic major scale)	**Degrees**	**VII**	**III**	**VI**	**II**	**V**	**I**	**IV**
	Chords	**m7♭5**	**m7**	**m7**	**m7**	**7**	**M7**	**M7**
Harmonic major	**Degrees**	-	-	-	**II**	**V**	**I**	**IV**
	Chords				**m7♭5**	**7**	**M7**	**mM7**
Melodic minor	**Degrees**	-	-	**VI**	**II**	**V**	**I**	**IV**
	Chords			**m7♭5**	**m7**	**7**	**mM7**	**7**
Harmonic minor	**Degrees**	-	-	-	**II**	**V**	**I**	**IV**
	Chords				**m7♭5**	**7**	**mM7**	**m7**
Melodic major ♭2	**Degrees**	-	-	-	-	**V**	**I**	**IV**
	Chords					**7♭5**	**M7**	**M7**
Harmonic major ♭2 (Byzantine Mode)	**Degrees**	-	-	-	-	**V**	**I**	**IV**
	Chords					**7♭5**	**7M**	**mM7**
Melodic minor ♭2 (Neapolitan major mode)	**Degrees**	-	-	-	-	**V**	**I**	**IV**
	Chords					**7♭5**	**mM7**	**7**
Harmonic minor ♭2 (Neapolitan minor mode)	**Degrees**	-	-	-	-	**V**	**I**	**IV**
	Chords					**7♭5**	**mM7**	**m7**

LinnStrument - Scales

A1. **Melodic major** (Diatonic major modes / Greek modes)

I M7
Ionian
Diatonic major scale

1		2		3	4		5		6		7	1		2	
5		6		7	1		2		3	4		5		6	
2		3	4		5		6		7	1		2		3	4
6		7	1		2		3	4		5		6		7	1

II m7
Dorian

1		2	♭3		4		5		6	♭7		1		2	♭3
5		6	♭7		1		2	♭3		4		5		6	♭7
2	♭3		4		5		6	♭7		1		2	♭3		4
6	♭7		1		2	♭3		4		5		6	♭7		1

III m7
Phrygian

1	♭2		♭3		4		5	♭6		♭7		1	♭2		♭3
5	♭6		♭7		1	♭2		♭3		4		5	♭6		♭7
	♭3		4		5	♭6		♭7		1	♭2		♭3		4
	♭7		1	♭2		♭3		4		5	♭6		♭7		1

IV M7
Lydian

1		2		3		♯4	5		6		7	1		2	
5		6		7	1		2		3		♯4	5		6	
2		3		♯4	5		6		7	1		2		3	
6		7	1		2		3		♯4	5		6		7	1

V 7
Mixolydian

1		2		3	4		5		6	♭7		1		2	
5		6	♭7		1		2		3	4		5		6	♭7
2		3	4		5		6	♭7		1		2		3	4
6	♭7		1		2		3	4		5		6	♭7		1

VI m7
Aeolian
Natural minor / Relative minor scale
Descending melodic minor scale

1		2	♭3		4		5	♭6		♭7		1		2	♭3
5	♭6		♭7		1		2	♭3		4		5	♭6		♭7
2	♭3		4		5	♭6		♭7		1		2	♭3		4
	♭7		1		2	♭3		4		5	♭6		♭7		1

VII m7♭5
Locrian

1	♭2		♭3		4	♭5		♭6		♭7		1	♭2		♭3
			♭7		1	♭2		♭3		4	♭5		♭6		♭7
	♭3		4	♭5		♭6		♭7		1	♭2		♭3		4
	♭7		1	♭2		♭3		4	♭5		♭6		♭7		1

LinnStrument - Scales

A2. Melodic major ♭2

I M7
Melodic major ♭2
Ionian ♭2

1	♭2			3	4		5		6		7	1	♭2		
5		6		7	1	♭2			3	4		5		6	
		3	4		5		6		7	1	♭2			3	4
6		7	1	♭2			3	4		5		6		7	1

IV M7
Lydian ♭6

1		2		3		♯4	5	♭6			7	1		2	
5	♭6			7	1		2		3		♯4	5	♭6		
2		3		♯4	5	♭6			7	1		2		3	
		7	1		2		3		♯4	5	♭6			7	1

V 7♭5
Mixolydian ♭5

1		2		3	4	♭5			6	♭7		1		2	
		6	♭7		1		2		3	4	♭5			6	♭7
2		3	4	♭5			6	♭7		1		2		3	4
6	♭7		1		2		3	4	♭5			6	♭7		1

A3. Melodic major ♭5

IV M7
Lydian ♭2

1	♭2			3		♯4	5		6		7	1	♭2		
5		6		7	1	♭2			3		♯4	5		6	
		3		♯4	5		6		7	1	♭2			3	
6		7	1	♭2			3		♯4	5		6		7	1

A4. Melodic major ♭2 ♭5

IV M7
Lydian ♭2 ♭6

1	♭2			3		♯4	5	♭6			7	1	♭2		
5	♭6			7	1	♭2			3		♯4	5	♭6		
		3		♯4	5	♭6			7	1	♭2			3	
		7	1	♭2			3		♯4	5	♭6			7	1

LinnStrument - Scales

B1. Harmonic major

I M7
Harmonic major
Ionien ♭6

1		2		3	4		5	♭6			7	1		2	
5	♭6			7	1		2		3	4		5	♭6		
2		3	4		5	♭6			7	1		2		3	4
		7	1		2		3	4		5	♭6			7	1

II m7♭5
Dorian ♭5

1		2	♭3		4	♭5			6	♭7		1		2	♭3
		6	♭7		1		2	♭3		4	♭5			6	♭7
2	♭3		4	♭5			6	♭7		1		2	♭3		4
6	♭7		1		2	♭3		4	♭5			6	♭7		1

III m7 (7)
Phrygian ♭4

1	♭2		♭3	♭4			5	♭6		♭7		1	♭2		♭3
5	♭6		♭7		1	♭2		♭3	♭4			5	♭6		♭7
	♭3	♭4			5	♭6		♭7		1	♭2		♭3	♭4	
	♭7		1	♭2		♭3	♭4			5	♭6		♭7		1

IV mM7
Lydian ♭3

1		2	♭3			♯4	5		6		7	1		2	♭3
5		6		7	1		2	♭3			♯4	5		6	
2	♭3			♯4	5		6		7M	1		2	♭3		
6		7	1		2	♭3			♯4	5		6		7	1

V 7
Mixolydian ♭2

1	♭2			3	4		5		6	♭7		1	♭2		
5		6	♭7		1	♭2			3	4		5		6	♭7
		3	4		5		6	♭7		1	♭2			3	4
6	♭7		1	♭2			3	4		5		6	♭7		1

♭VI M7♯5
Lydian ♯2 ♯5

1			♯2	3		♯4		♯5	6		7	1			♯2
	♯5	6		7	1			♯2	3		♯4		♯5	6	
	♯2	3		♯4		♯5	6		7	1			♯2	3	
6		7	1			♯2	3		♯4		♯5	6		7	1

VII dim7
Locrian ♭7

1	♭2		♭3		4	♭5		♭2	♭♭7			1	♭2		♭3
	♭6	♭♭7			1	♭2		♭6		4	♭5		♭6	♭♭7	
	♭3		4	♭5		♭6	♭♭7			1	♭2		♭3		4
♭♭7			1	♭2		♭3		4	♭5		♭6	♭♭7			1

LinnStrument - Scales

B2. Harmonic major ♭2 (Byzantine mode)

I M7
Harmonic major ♭2
Ionian ♭2 ♭6
Byzantine scale / Double harmonic

1	♭2			3	4		5	♭6			7	1	♭2		
5	♭6			7	1	♭2			3	4		5	♭6		
		3	4		5	♭6			7	1	♭2			3	4
		7	1	♭2			3	4		5	♭6			7	1

IV mM7
Lydian ♭3 ♭6
Hungarian / Gypsy minor
Double harmonic minor

1		2	♭3			♯4	5	♭6			7	1		2	♭3
5	♭6			7	1		2	♭3			♯4	5	♭6		
2	♭3			♯4	5	♭6			7	1		2	♭3		
		7	1		2	♭3			♯4	5	♭6			7	1

V 7♭5
Mixolydian ♭2 ♭5
Oriental scale

1	♭2			3	4	♭5			6	♭7		1	♭2		
		6	♭7		1	♭2			3	4	♭5			6	♭7
		3	4	♭5			6	♭7		1	♭2			3	4
6	♭7		1	♭2			3	4	♭5			6	♭7		1

B3. Harmonic major ♭5

IV mM7
Lydian ♭2 ♭3

1	♭2		♭3			♯4	5		6		7	1	♭2		♭3
5		6		7	1	♭2		♭3			♯4	5		6	
	♭3			♯4	5		6		7	1	♭2		♭3		
6		7	1	♭2		♭3			♯4	5		6		7	1

B4. Harmonic major ♭2 ♭5

IV mM7
Phrygian ♯4 ♮7

1	♭2		♭3			♯4	5	♭6			7	1	♭2		♭3
5	♭6			7	1	♭2		♭3			♯4	5	♭6		
	♭3			♯4	5	♭6			7	1	♭2		♭3		
		7	1	♭2		♭3			♯4	5	♭6			7	1

LinnStrument - Scales

C1. Melodic minor

I mM7
Melodic minor
Ionian ♭3 / Dorian ♮7
Ascending melodic minor scale

1		2	♭3		4		5		6		7	1		2	♭3
5		6		7	1		2	♭3		4		5		6	
2	♭3		4		5		6		7	1		2	♭3		4
6		7	1		2	♭3		4		5		6		7	1

II m7
Dorian ♭2
Phrygian ♯6
Cappadocian scale

1	♭2		♭3		4		5		6	♭7		1	♭2		♭3
5		6	♭7		1	♭2		♭3		4		5		6	♭7
	♭3		4		5		6	♭7		1	♭2		♭3		4
6	♭7		1	♭2		♭3		4		5		6	♭7		1

♭III M7♯5
Lydian ♯5

1		2		3		♯4		♯5	6		7	1		2	
	♯5	6		7	1		2		3		♯4		♯5	6	
2		3		♯4		♯5	6		7	1		2		3	
6		7	1		2		3		♯4		♯5	6		7	1

IV 7
Lydian ♭7
Mixolydian ♯4
Acoustic scale / Bartok

1		2		3		♯4	5		6	♭7		1		2	
5		6	♭7		1		2		3		♯4	5		6	♭7
2		3		♯4	5		6	♭7		1		2		3	
6	♭7		1		2		3		♯4	5		6	♭7		1

V 7
Mixolydian ♭6
Aeolian ♮3

1		2		3	4		5	♭6		♭7		1		2	
5	♭6		♭7		1		2		3	4		5	♭6		♭7
2		3	4		5	♭6		♭7		1		2		3	4
	♭7		1		2		3	4		5	♭6		♭7		1

VI m7♭5
Aeolian ♭5
Locrian ♮2

1		2	♭3		4	♭5		♭6		♭7		1		2	♭3
	♭6		♭7		1		2	♭3		4	♭5		♭6		♭7
2	♭3		4	♭5		♭6		♭7		1		2	♭3		4
	♭7		1		2	♭3		4	♭5		♭6		♭7		1

VII m7♭5
Locrian ♭4
Dim. Ionian
Altered scale / Superlocrian

1	♭2		♭3	♭4		♭5		♭6		♭7		1	♭2		♭3
	♭6		♭7		1	♭2		♭3	♭4		♭5		♭6		♭7
	♭3	♭4		♭5		♭6		♭7		1	♭2		♭3	♭4	
	♭7		1	♭2		♭3	♭4		♭5		♭6		♭7		1

LinnStrument - Scales

C2. Melodic minor ♭2 (Neaopolitan major mode)

I mM7
Melodic minor ♭2
Ionien ♭2 ♭3
Neapolitan major scale

1	♭2		♭3		4		5		6		7	1	♭2		♭3
5		6		7	1	♭2		♭3		4		5		6	
	♭3		4		5		6		7	1	♭2		♭3		4
6		7	1	♭2		♭3		4		5		6		7	1

IV 7
Lydian ♭6 ♭7

1		2		3		♯4	5	♭6		♭7		1		2	
5	♭6		♭7		1		2		3		♯4	5	♭6		♭7
2		3		♯4	5	♭6		♭7		1		2		3	
	♭7		1		2		3		♯4	5	♭6		♭7		1

V 7♭5
Mixolydian ♭5 ♭6

1	♭2			3	4	♭5		♭6		♭7		1	♭2		
	♭6		♭7		1	♭2			3	4	♭5		♭6		♭7
		3	4	♭5		♭6		♭7		1	♭2			3	4
	♭7		1	♭2			3	4	♭5		♭6		♭7		1

C3. Melodic minor ♭5

IV 7
Mixolydian ♭2 ♯4

1	♭2			3		♯4	5		6	♭7		1	♭2		
5		6	♭7		1	♭2			3		♯4	5		6	♭7
		3		♯4	5		6	♭7		1	♭2			3	
6	♭7		1	♭2			3		♯4	5		6	♭7		1

C4. Melodic minor ♭2 ♭5

IV 7
Phrygian ♮3 ♯4

1	♭2			3		♯4	5	♭6		♭7		1	♭2		
5	♭6		♭7		1	♭2			3		♯4	5	♭6		♭7
		3		♯4	5	♭6		♭7		1	♭2			3	
	♭7		1	♭2			3		♯4	5	♭6		♭7		1

LinnStrument - Scales

D1. Harmonic minor

I mM7
Harmonic minor
Aeolian ♮7

1		2	♭3		4		5	♭6			7	1		2	♭3
5	♭6			7	1		2	♭3		4		5	♭6		
2	♭3		4		5	♭6			7	1		2	♭3		4
		7	1		2	♭3		4		5	♭6			7	1

II m7♭5
Locrian ♮6

1	♭2		♭3		4	♭5			6	♭7		1	♭2		♭3
		6	♭7		1	♭2		♭3		4	♭5			6	♭7
	♭3		4	♭5			6	♭7		1	♭2		♭3		4
6	♭7		1	♭2		♭3		4	♭5			6	♭7		1

♭III M7♯5
Ionian ♯5

1		2		3	4			♯5	6		7	1		2	
	♯5	6		7	1		2		3	4			♯5	6	
2		3	4			♯5	6		7	1		2		3	4
6		7	1		2		3	4			♯5	6		7	1

IV m7
Dorian ♯4
Romanian scale

1		2	♭3			♯4	5		6	♭7		1		2	♭3
5		6	♭7		1		2	♭3			♯4	5		6	♭7
2	♭3			♯4	5		6	♭7		1		2	♭3		
6	♭7		1		2	♭3			♯4	5		6	♭7		1

V 7
Phrygian ♮3
Phrygian dominant / Spanish Phrygian
Spanish Gypsy / Jewish scale

1	♭2			3	4		5	♭6		♭7		1	♭2		
5	♭6		♭7		1	♭2			3	4		5	♭6		♭7
		3	4		5	♭6		♭7		1	♭2			3	4
	♭7		1	♭2			3	4		5	♭6		♭7		1

♭VI M7
Lydian ♯2

1			♯2	3		♯4	5		6		7	1			♯2
5		6		7	1			♯2	3		♯4	5		6	
	♯2	3		♯4	5		6		7	1			♯2	3	
6		7	1			♯2	3		♯4	5		6		7	1

VII dim7
Locrian ♭4 ♭♭7
Dim. Mixolydian

1	♭2		♭3	♭4		♭5		♭6	♭♭7			1	♭2		♭3
	♭6	♭♭7			1	♭2		♭3	♭4		♭5		♭6	♭♭7	
	♭3	♭4		♭5		♭6	♭♭7			1	♭2		♭3	♭4	
♭♭7			1	♭2		♭3	♭4		♭5		♭6	♭♭7			1

LinnStrument - Scales

D2. Harmonic minor ♭2 (Neaopolitan minor mode)

I mM7
Harmonic minor ♭2
Phrygian ♮7
Neapolitan minor scale

1	♭2		♭3		4		5	♭6			7	1	♭2		♭3
5	♭6			7	1	♭2		♭3		4		5	♭6		
	♭3		4		5	♭6			7	1	♭2		♭3		4
		7	1	♭2		♭3		4		5	♭6			7	1

IV m7
Aeolian ♯4
Hungarian Gypsy scale

1		2	♭3			♯4	5	♭6		♭7		1		2	♭3
5	♭6		♭7		1		2	♭3			♯4	5	♭6		♭7
2	♭3			♯4	5	♭6		♭7		1		2	♭3		
	♭7		1		2	♭3			♯4	5	♭6		♭7		1

V 7♭5
Locrian ♮3

1	♭2			3	4	♭5		♭6		♭7		1	♭2		
	♭6		♭7		1	♭2			3	4	♭5		♭6		♭7
		3	4	♭5		♭6		♭7		1	♭2			3	4
	♭7		1	♭2			3	4	♭5		♭6		♭7		1

D3. Harmonic minor ♭5

IV m7
Dorian ♭2 ♯4

1	♭2		♭3			♯4	5		6	♭7		1	♭2		♭3
5		6	♭7		1	♭2		♭3			♯4	5		6	♭7
	♭3			♯4	5		6	♭7		1	♭2		♭3		
6	♭7		1	♭2		♭3			♯4	5		6	♭7		1

D4. Harmonic minor ♭2 ♭5

IV m7
Phrygian ♯4

1	♭2		♭3			♯4	5	♭6		♭7		1	♭2		♭3
5	♭6		♭7		1	♭2		♭3			♯4	5	♭6		♭7
	♭3			♯4	5	♭6		♭7		1	♭2		♭3		
	♭7		1	♭2		♭3			♯4	5	♭6		♭7		1

LinnStrument - Scales

Diatonic major scale / Ionian mode

3 shapes

	3	4		5
	7	1		2
4		5		6
1		2		3

	2		3	4
	6		7	1
	3	4		5
		1		2

1		2		3
5		6		7
2		3	4	
			1	

Overview [4x20 Grid]

1		2		3	4		5		6		7	1		2		3	4		5
5		6		7	1		2		3	4		5		6		7	1		2
2		3	4		5		6		7	1		2		3	4		5		6
6		7	1		2		3	4		5		6		7	1		2		3

Overview [8x20 Grid]

	6		7	1		2		3	4		5		6		7	1		2	
	3	4		5		6		7	1		2		3	4		5		6	
	7	1		2		3	4		5		6		7	1		2		3	4
4		5		6		7	1		2		3	4		5		6		7	1
1		2		3	4		5		6		7	1		2		3	4		5
5		6		7	1		2		3	4		5		6		7	1		2
2		3	4		5		6		7	1		2		3	4		5		6
6		7	1		2		3	4		5		6		7	1		2		3

4 octave range

														1		2		3	
												4		5		6		7	
											7	1		2		3			
									3	4		5		6					
							6		7	1		2							
					2		3	4		5									
			5		6		7	1											
	1		2		3	4													

LinnStrument - Scales

Natural minor scale / Aeolian mode

3 shapes

♭3		4		5
♭7		1		2
4		5	♭6	
1		2	♭3	

	2	♭3		4
♭6		♭7		1
♭3		4		5
		1		2

1		2	♭3	
5	♭6		♭7	
2	♭3		4	
	♭7		1	

Overview [4x20 Grid]

1		2	♭3		4		5	♭6		♭7		1		2	♭3		4		5
5	♭6		♭7		1		2	♭3		4		5	♭6		♭7		1		2
2	♭3		4		5	♭6		♭7		1		2	♭3		4		5	♭6	
	♭7		1		2	♭3		4		5	♭6		♭7		1		2	♭3	

Overview [8x20 Grid]

♭6		♭7		1		2	♭3		4		5	♭6		♭7		1		2	♭3
♭3		4		5	♭6		♭7		1		2	♭3		4		5	♭6		♭7
♭7		1		2	♭3		4		5	♭6		♭7		1		2	♭3		4
4		5	♭6		♭7		1		2	♭3		4		5	♭6		♭7		1
1		2	♭3		4		5	♭6		♭7		1		2	♭3		4		5
5	♭6		♭7		1		2	♭3		4		5	♭6		♭7		1		2
2	♭3		4		5	♭6		♭7		1		2	♭3		4		5	♭6	
	♭7		1		2	♭3		4		5	♭6		♭7		1		2	♭3	

4 octave range

														1		2	♭3		
												4		5	♭6		♭7		
										♭7		1		2	♭3				
								♭3		4		5	♭6						
						♭6		♭7		1		2							
					2	♭3		4		5									
			5	♭6		♭7		1											
	1		2	♭3		4													

LinnStrument - Scales

Major Pentatonic scale

2		3	
6			1
3			5
	1		2

3			5
	1		2
	5		6
	2		3

5		6	
2		3	
6			1
3			5

6			1
3			5
	1		2
	5		6

1		2		3
5		6		
2		3		
6			1	

Overview
[4x20 Grid]

1		2		3			5		6			1		2		3			5
5		6			1		2		3			5		6			1		2
2		3			5		6			1		2		3			5		6
6			1		2		3			5		6			1		2		3

Overview
[8x20 Grid]

	6			1		2		3			5		6			1		2	
	3			5		6			1		2		3			5		6	
		1		2		3			5		6			1		2		3	
		5		6			1		2		3			5		6			1
1		2		3			5		6			1		2		3			5
5		6			1		2		3			5		6			1		2
2		3			5		6			1		2		3			5		6
6			1		2		3			5		6			1		2		3

4 octave range

														1		2		3	
														5		6			
												1		2		3			
									3			5		6					
							6			1		2							
					2		3			5									
			5		6			1											
	1		2		3														

LinnStrument - Scales

Minor Pentatonic scale

♭3		4	
♭7		1	
4		5	
1			♭3

4		5	
1			♭3
5			♭7
	♭3		4

5			♭7
	♭3		4
	♭7		1
	4		5

♭7		1	
4		5	
1			♭3
5			♭7

	1			♭3
	5			♭7
		♭3		4
		♭7		1

Overview [4x20 Grid]

1			♭3		4		5			♭7		1			♭3		4		5
5			♭7		1			♭3		4		5			♭7		1		
	♭3		4		5			♭7		1			♭3		4		5		
	♭7		1			♭3		4		5			♭7		1			♭3	

Overview [8x20 Grid]

		♭7		1			♭3		4		5			♭7		1			♭3
♭3		4		5			♭7		1			♭3		4		5			♭7
♭7		1			♭3		4		5			♭7		1			♭3		4
4		5			♭7		1			♭3		4		5			♭7		1
1			♭3		4		5			♭7		1			♭3		4		5
5			♭7		1			♭3		4		5			♭7		1		
	♭3		4		5			♭7		1			♭3		4		5		
	♭7		1			♭3		4		5			♭7		1			♭3	

4 octave range

														1			♭3		
														5			♭7		
												1			♭3		4		
										4		5			♭7				
								♭7		1			♭3						
						♭3		4		5									
			5			♭7		1											
	1			♭3		4													

LinnStrument 200 - Tunings

Standard tuning (Fourths)

MIDI	I		III		V		VII			X		XII			XV					XX					XXV
F3	F		G		A		B	C4		D		E	F		G		A		B	C5		D		E	F
C3	C3		D		E	F		G		A		B	C4		D		E	F		G		A		B	C5
G2	G		A		B	C3		D		E	F		G		A		B	C3		D		E	F		G
D2	D		E	F		G		A		B	C3		D		E	F		G		A		B		C4	
A1	A		B	C2		D		E	F		G		A		B	C3		D		E	F		G		A
E1	E	F		G		A		B	C2		D		E	F		G		A		B	C3		D		E
B0	B	C1		D		E	F		G		A		B	C2		D		E	F		G		A		B
F#0		G		A		B	C1		D		E	F		G		A		B	C2		D		E	F	

Standard tuning (Fifths)

MIDI	I		III		V		VII			X		XII			XV					XX					XXV
F#4		G		A		B	C5		D		E	F		G		A		B	C6		D		E	F	
B3	B	C4		D		E	F		G		A		B	C5		D		E	F		G		A		B
E3	E	F		G		A		B	C4		D		E	F		G		A		B	C5		D		E
A2	A		B	C3		D		E	F		G		A		B	C4		D		E	F		G		A
D2	D		E	F		G		A		B	C3		D		E	F		G		A		B	C4		D
G1	G		A		B	C2		D		E	F		G		A		B	C2		D		E	F		G
C1	C1		D		E	F		G		A		B	C2		D		E	F		G		A		B	C3
F0	F		G		A		B	C1		D		E	F		G		A		B	C1		D		E	F

Tritone tuning

MIDI	I		III		V		VII			X		XII			XV					XX					XXV
A#3		B	C4		D		E	F		G		A		B	C5		D		E	F		G		A	
E3	E	F		G		A		B	C4		D		E	F		G		A		B	C5		D		E
A#2		B	C3		D		E	F		G		A		B	C4		D		E	F		G		A	
E2	E	F		G		A		B	C3		D		E	F		G		A		B	C4		D		E
A#1		B	C2		D		E	F		G		A		B	C3		D		E	F		G		A	
E1	E	F		G		A		B	C2		D		E	F		G		A		B	C3		D		E
A#0		B	C1		D		E	F		G		A		B	C2		D		E	F		G		A	
E0	E	F		G		A		B	C1		D		E	F		G		A		B	C2		D		E

LinnStrument 200 - Tunings

Standard tuning (Fourths)

Maj
Min

				1			♭3	3			5					1			♭3	3			5	
♭3	3			5					1			♭3	3			5					1			♭3
		1			♭3	3			5					1			♭3	3			5			
		5					1			♭3	3			5					1			♭3	3	
1			♭3	3			5					1			♭3	3			5					1
5					1			♭3	3			5					1			♭3	3			5
	♭3	3			5					1			♭3	3			5					1		
			1			♭3	3			5					1			♭3	3			5		

Standard tuning (Fifths)

Maj
Min

		1			♭3	3			5					1			♭3	3			5			
♭3	3			5					1			♭3	3			5					1			♭3
				1			♭3	3			5					1			♭3	3			5	
		♭3	3			5					1			♭3	3			5					1	
	5					1			♭3	3			5					1			♭3	3		
	1			♭3	3			5					1			♭3	3			5				
3			5					1			♭3	3			5					1			♭3	3
			1			♭3	3			5					1			♭3	3			5		

Tritone tuning

Maj
Min

♭3	3			5					1			♭3	3			5					1			♭3
			1			♭3	3			5					1			♭3	3			5		
♭3	3			5					1			♭3	3			5					1			♭3
			1			♭3	3			5					1			♭3	3			5		
♭3	3			5					1			♭3	3			5					1			♭3
			1			♭3	3			5					1			♭3	3			5		
♭3	3			5					1			♭3	3			5					1			♭3
			1			♭3	3			5					1			♭3	3			5		

LinnStrument 128 - Tunings

Standard tuning (Fourths)

MIDI	I		III		V		VII			X		XII			XV	
F3	F		G		A		B	C4		D		E	F		G	
C3	C3		D		E	F		G		A		B	C4		D	
G2	G		A		B	C3		D		E	F		G		A	
D2	D		E	F		G		A		B	C3		D		E	F
A1	A		B	C2		D		E	F		G		A		B	C3
E1	E	F		G		A		B	C2		D		E	F		G
B0	B	C1		D		E	F		G		A		B	C2		D
F#0		G		A		B	C1		D		E	F		G		A

Guitar tuning

MIDI	I		III		V		VII			X		XII			XV	
E3	E	F		G		A		B	C4		D		E	F		G
B3	B	C3		D		E	F		G		A		B	C4		D
G2	G		A		B	C3		D		E	F		G		A	
D2	D		E	F		G		A		B	C3		D		E	F
A1	A		B	C2		D		E	F		G		A		B	C3
E1	E	F		G		A		B	C2		D		E	F		G
B0	B	C1		D		E	F		G		A		B	C2		D
F#0		G		A		B	C1		D		E	F		G		A

Standard tuning (Fifths)

MIDI	I		III		V		VII			X		XII			XV	
F#4		G		A		B	C5		D		E	F		G		A
B3	B	C4		D		E	F		G		A		B	C5		D
E3	E	F		G		A		B	C4		D		E	F		G
A2	A		B	C3		D		E	F		G		A		B	C4
D2	D		E	F		G		A		B	C3		D		E	F
G1	G		A		B	C2		D		E	F		G		A	
C1	C1		D		E	F		G		A		B	C2		D	
F0	F		G		A		B	C1		D		E	F		G	

Tritone tuning

MIDI	I		III		V		VII			X		XII			XV	
A#3		B	C4		D		E	F		G		A		B	C5	
E3	E	F		G		A		B	C4		D		E	F		G
A#2		B	C3		D		E	F		G		A		B	C4	
E2	E	F		G		A		B	C3		D		E	F		G
A#1		B	C2		D		E	F		G		A		B	C3	
E1	E	F		G		A		B	C2		D		E	F		G
A#0		B	C1		D		E	F		G		A		B	C2	
E0	E	F		G		A		B	C1		D		E	F		G

LinnStrument 128 - Tunings

Standard tuning (Fourths)

Maj
Min

				1			♭3	3			5				
♭3	3			5					1			♭3	3		
		1			♭3	3			5					1	
		5					1			♭3	3			5	
1			♭3	3			5					1			♭3
5					1			♭3	3			5			
	♭3	3			5					1			♭3	3	
			1			♭3	3			5					1

Guitar tuning

Maj
Min

5					1			♭3	3			5			
	♭3	3			5					1			♭3	3	
		1			♭3	3			5					1	
		5					1			♭3	3			5	
1			♭3	3			5					1			♭3
5					1			♭3	3			5			
	♭3	3			5					1			♭3	3	
			1			♭3	3			5					1

Standard tuning (Fifths)

Maj
Min

		1			♭3	3			5					1	
♭3	3			5					1			♭3	3		
				1			♭3	3			5				
		♭3	3			5					1			♭3	3
	5					1			♭3	3			5		
	1			♭3	3			5					1		
3			5					1			♭3	3			5
			1			♭3	3			5					1

Tritone tuning

Maj
Min

♭3	3			5					1			♭3	3		
			1			♭3	3			5					1
♭3	3			5					1			♭3	3		
			1			♭3	3			5					1
♭3	3			5					1			♭3	3		
			1			♭3	3			5					1
♭3	3			5					1			♭3	3		
			1			♭3	3			5					1

LinnStrument 128 - Vertical tuning (Fourths)

MIDI																
A#5	XV		B	C6		D		E	F			1			♭3	3	
F5		F		G		A		B	C6			5					1
C5		C5		D		E	F		G	1			♭3	3			5
G4	XII	G		A		B	C5			5					1		
D4		D		E	F		G		A		♭3	3			5		
A3	X	A		B	C4		D		E				1			♭3	3
E3		E	F		G		A		B	3			5				
B2		B	C3		D		E	F			1			♭3	3		
F#2	VII		G		A		B	C3			5					1	
C#2			D		E	F		G				♭3	3			5	
G#1	V		A		B	C2		D						1			♭3
D#1			E	F		G		A		♭3	3			5			
A#0	III		B	C1		D		E	F			1			♭3	3	
F0		F		G		A		B	C1			5					1
C0	I	C0		D		E	F		G	1			♭3	3			5

Further information on this topic :

Harpejji Tuning : https://www.rogerlinndesign.com/support/support-linnstrument-linnstrument-tips-tricks

KVR Audio Forum : A firmware modification for playing LinnStrument "vertically"

Frequency Chart - Equal temperament (Hz)

MIDI / Latin	-1	0	1	2	3	4	5	6	7	8	Factor
ASPN	0	1	2	3	4	5	6	7	8	9	
C	16.4	32.7	65.4	130.8	261.6	523.3	1'047	2'093	4'186	8'372	1.000
C♯ / D♭	17.3	34.6	69.3	138.6	277.2	554.4	1'109	2'217	4'435	8'870	**1.059**
D	18.4	36.7	73.4	146.8	293.7	587.3	1'175	2'349	4'699	9'397	**1.122**
D♯ / E♭	19.4	38.9	77.8	155.6	311.1	622.3	1'245	2'489	4'978	9'956	**1.189**
E	20.6	41.2	82.4	164.8	329.6	659.3	1'319	2'637	5'274	10'548	**1.260**
F	21.8	43.7	87.3	174.6	349.2	698.5	1'397	2'794	5'588	11'175	**1.335**
F♯ / G♭	23.1	46.2	92.5	185.0	370.0	740.0	1'480	2'960	5'920	11'840	**1.414**
G	24.5	49.0	98.0	196.0	392.0	784.0	1'568	3'136	6'272	12'544	**1.498**
G♯ / A♭	26.0	51.9	103.8	207.7	415.3	830.6	1'661	3'322	6'645	13'290	**1.587**
A	27.5	55.0	110.0	220.0	440.0	880.0	1'760	3'520	7'040	14'080	**1.682**
A♯ / B♭	29.1	58.3	116.5	233.1	466.2	932.3	1'865	3'729	7'459	14'917	**1.782**
B	30.9	61.7	123.5	246.9	493.9	987.8	1'976	3'951	7'902	15'804	**1.888**

16 Heptatonic scales / 56 modes

Overview (1)

A. Melodic Major Modes

4 scales (14 modes)

Scale / Mode	Scale												
A1/I Melodic major (Diatonic major modes)	1		2		3	4		5		6		7	1
A2/I Melodic major ♭2	1	♭2			3	4		5		6		7	1
A3/I Melodic major ♭5	1		2		3	4	♭5			6		7	1
A4/I Melodic major ♭2 ♭5	1	♭2			3	4	♭5			6		7	1

A1. 7 modes (I-VII) - A2. 3 modes (I, IV, V) - A3. 2 modes (I, IV) - A4. 2 modes (I, IV)

B. Harmonic Major Modes

4 scales (14 modes)

Scale / Mode	Scale												
B1/I Harmonic major	1		2		3	4		5	♭6			7	1
B2/I Harmonic major ♭2 (Byzantine scale)	1	♭2			3	4		5	♭6			7	1
B3/I Harmonic major ♭5	1		2		3	4	♭5		♭6			7	1
B4/I Harmonic major ♭2 ♭5	1	♭2			3	4	♭5		♭6			7	1

B1. 7 modes (I-VII) - B2. 3 modes (I, IV, V) - B3. 2 modes (I, IV) - B4. 2 modes (I, IV)

C. Melodic Minor Modes

4 scales (14 modes)

Scale / Mode	Scale												
C1/I Melodic minor	1		2	♭3		4		5		6		7	1
C2/I Melodic minor ♭2 (Neapolitan major scale)	1	♭2		♭3		4		5		6		7	1
C3/I Melodic minor ♭5	1		2	♭3		4	♭5			6		7	1
C4/I Melodic minor ♭2 ♭5	1	♭2		♭3		4	♭5			6		7	1

C1. 7 modes (I-VII) - C2. 3 modes (I, IV, V) - C3. 2 modes (I, IV) - C4. 2 modes (I, IV)

D. Harmonic Minor Modes

4 scales (14 modes)

Scale / Mode	Scale												
D1/I Harmonic minor	1		2	♭3		4		5	♭6			7	1
D2/I Harmonic minor ♭2 (Neapolitan minor scale)	1	♭2		♭3		4		5	♭6			7	1
D3/I Harmonic minor ♭5	1		2	♭3		4	♭5		♭6			7	1
D4/I Harmonic minor ♭2 ♭5	1	♭2		♭3		4	♭5		♭6			7	1

D1. 7 modes (I-VII) - D2. 3 modes (I, IV, V) - D3. 2 modes (I, IV) - D4. 2 modes (I, IV)

Common notes

Basic Modes	2	5
Altered ♭2 Modes	♭2	5
Altered ♭5 Modes	2	♭5
Altered ♭2 ♭5 Modes	♭2	♭5

Major Modes	3	4
Minor Modes	♭3	4

Melodic Modes	6
Harmonic Modes	♭6
All Modes	7

16 Heptatonic scales / 56 modes

Overview (2)

A. 4 Melodic major scales (14 modes)

A1. Melodic major (Diatonic major modes)	
I	**Ionian** (Melodic major)
II	**Dorian**
III	**Phrygian**
IV	**Lydian**
V	**Mixolydian**
VI	**Aeolian** (Natural minor scale)
VII	**Locrian**
A2. Melodic major ♭2	
I	**Melodic major ♭2** (Ionian ♭2)
IV	**Lydian ♭6**
V	**Mixolydian ♭5**
A3. Melodic major ♭5	
I	**Melodic major ♭5** (Ionian ♭5)
IV	**Lydian ♭2**
A4. Melodic major ♭2 ♭5	
I	**Melodic major ♭2 ♭5**
IV	**Lydian ♭2 ♭6**

B. 4 Harmonic major scales (14 modes)

B1. Harmonic major	
I	**Harmonic major** (Ionian ♭6)
II	**Dorian ♭5**
III	**Phrygian ♭4**
IV	**Lydian ♭3**
V	**Mixolydian ♭2**
♭VI	**Lydian ♯2 ♭5** (Aug. Aeolian)
VII	**Locrian ♭♭7**
B2. Harmonic major ♭2 (Byzantine mode)	
I	**Harmonic major ♭2** (Ionian ♭2 ♭6)
IV	**Lydian ♭3 ♭6**
V	**Mixolydian ♭2 ♭5**
B3. Harmonic major ♭5	
I	**Harmonic major ♭5** (Ionian ♭5 ♭6)
IV	**Lydian ♭2 ♭3**
B4. Majeur harmonique 2m/5b	
I	**Harmonic major ♭2 ♭5** (Persian scale)
IV	**Phrygian ♯4 ♮7**

C. 4 Melodic minor scales (14 modes)

C1. Melodic minor	
I	**Melodic minor** (Ionian ♭3/Dorian ♮7)
II	**Dorian ♭2** (Phrygian ♮6)
♭III	**Lydian ♯5** (Aug. Phrygian)
IV	**Lydian ♭7** (Mixolydian ♯4)
V	**Mixolydian ♭6** (Aeolian ♮3)
VI	**Aeolian ♭5** (Locrian ♮2)
VII	**Locrian ♭4** (Dim. Ionian)
C2. Melodic minor ♭2 (Neaopolitan major)	
I	**Melodic minor ♭2** (Ionian ♭2 ♭3)
IV	**Lydian ♭6 ♭7**
V	**Mixolydian ♭5 ♭6**
C3. Melodic minor ♭5	
I	**Melodic minor ♭5** (Ionian ♭3 ♭5)
IV	**Mixolydian ♭2 ♯4** (Lydian ♭2 ♭7)
C4. Melodic minor ♭2 ♭5	
I	**Melodic minor ♭2 ♭5** (Locrian ♮6 ♮7)
IV	**Phrygian ♮3 ♯4**

D. 4 Harmonic minor scales (14 modes)

D1. Harmonic minor	
I	**Harmonic minor** (Aeolian ♮7)
II	**Locrian ♮6**
♭III	**Ionian ♯5**
IV	**Dorian ♯4**
V	**Phrygian ♮3**
♭VI	**Lydian ♯2**
VII	**Locrian ♭4 ♭♭7** (Dim. Mixolydian)
D2. Harmonic minor ♭2 (Neaopolitan minor)	
I	**Harmonic minor ♭2** (Phrygian ♮7)
IV	**Aeolian ♯4**
V	**Locrian ♮3**
D3. Harmonic minor ♭5	
I	**Harmonic minor ♭5** (Aeolian ♭5 ♮7)
IV	**Dorian ♭2 ♯4** (Phrygian ♯4 ♮6)
D4. Harmonic minor ♭2 ♭5	
I	**Harmonic minor ♭2 ♭5** (Locrian ♮7)
IV	**Phrygian ♯4**

16 Heptatonic scales / 56 modes

12 Tetrachords

2 Tones			1st (Lower)								2nd (Upper)				
Phrygian	1-2-1	2T Phry	1	♭2	-	♭3	♭4				♯5	6	-	7	1

2½ Tones			1st (Lower)								2nd (Upper)				
Phrygian	1-2-2	2T½ Phry	1	♭2	-	♭3	-	4			5	♭6	-	♭7	-	1
Harmonic	1-3-1	2T½ Harm	1	♭2	-	-	3	4			5	♭6	-	-	7	1
Minor	2-1-2	2T½ Min	1	-	2	♭3	-	4			5	-	6	♭7	-	1
Major	2-2-1	2T½ Maj	1	-	2	-	3	4			5	-	6	-	7	1

3 Tones			1st (Lower)								2nd (Upper)						
Phrygian	1-2-3	3T Phry	1	♭2	-	♭3	-	-	♯4		♭5	♭♭6	-	♭♭7	-	-	1
Harmonic	1-3-2	3T Harm	1	♭2	-	-	3	-	♯4		♭5	♭♭6	-	-	♭7	-	1
Minor	2-1-3	3T Min	1	-	2	♭3	-	-	♯4		♭5	-	♭6	♭♭7	-	-	1
Major	2-2-2	3T Maj	1	-	2	-	3	-	♯4		♭5	-	♭6	-	♭7	-	1
Major +	2-3-1	3T Maj+	1	-	2	-	-	♯3	♯4		♭5	-	♭6	-	-	7	1
Augmented 1	3-1-2	3T Aug1	1	-	-	♯2	3	-	♯4		♭5	-	-	6	♭7	-	1
Augmented 2	3-2-1	3T Aug2	1	-	-	♯2	-	♯3	♯4		♭5	-	-	6	-	7	1

Combination of Tetrachords

1st Tetrachord
2T
2T½
3T

2nd Tetrachord		
-	2T½	3T
2T	2T½	3T
2T	2T½	-

Intervals

1	♭2	2	♯2 ♭3	3	4	♯4 ♭5	5	♯5 ♭6	6	♯6 ♭7	7	1
			♯2		♯3	♯4		♯5		♯6		
1		2		3	4		5		6		7	1
	♭2		♭3	♭4		♭5		♭6		♭7		
		♭♭3					♭♭6		♭♭7			
	♭9	9	♯9		11	♯11		♭13	13			

Complementary Intervals												
	♭2		2		♭3		3		4		♯4	
	7		♭7		6		♭6		5		♭5	

16 Heptatonic scales / 56 modes

Chords (with Extensions)

A. Melodic major

A1. Melodic major (Diatonic maj. modes)				
I	M7	9	11	13
II	m7	9	11	13
III	m7	♭9	11	♭13
IV	M7	9	♯11	13
V	7	9	11	13
VI	m7	9	11	♭13
VII	m7♭5	♭9	11	♭13

A2. Melodic major ♭2				
I	M7	♭9	11	13
IV	M7	9	♯11	♭13
V	7♭5	9	11	13

A3. Melodic major ♭5				
I	M7♭5	9	11	13
IV	M7	♭9	♯11	13

A4. Melodic major ♭2 ♭5				
I	M7♭5	♭9	11	13
IV	M7	♭9	♯11	♭13

B. Harmonic major

B1. Harmonic major				
I	M7	9	11	♭13
II	m7♭5	9	11	13
III	m7 (7)	♭9	-	♭13
IV	mM7	9	♯11	13
V	7	♭9	11	13
♭VI	M7♯5	♭9	♯11	13
VII	dim7	-	11	♭13

B2. Harmonic major ♭2 (Byzantine mode)				
I	M7	♭9	11	♭13
IV	mM7	9	♯11	♭13
V	7♭5	♭9	11	13

B3. Harmonic major ♭5				
I	M7♭5	9	11	♭13
IV	mM7	♭9	♯11	13

B4. Harmonic major ♭2 ♭5				
I	M7♭5	♭9	11	♭13
IV	mM7	♭9	♯11	♭13

C. Melodic minor

C1. Melodic minor				
I	mM7	9	11	13
II	m7	♭9	11	13
♭III	M7♯5	9	♯11	13
IV	7	9	♯11	13
V	7	9	11	♭13
VI	m7♭5	9	11	♭13
VII	m7♭5	♭9	♯11	♭13

C2. Melodic minor ♭2 (Neaopolitan major)				
I	mM7	♭9	11	13
IV	7	9	♯11	♭13
V	7♭5	♭9	11	13

C3. Melodic minor ♭5				
I	mM7♭5	9	11	13
IV	7	♭9	♯11	13

C4. Melodic minor ♭2 ♭5				
I	mM7♭5	♭9	11	13
IV	7	♭9	♯11	♭13

D. Harmonic minor

D1. Harmonic minor				
I	mM7	9	11	♭13
II	m7♭5	♭9	11	13
♭III	M7♯5	9	11	13
IV	m7	9	♯11	13
V	7	♭9	11	♭13
♭VI	M7	♯9	♯11	13
VII	dim7	-	-	♭13

2. Harmonic minor ♭2 (Neaopolitan minor)				
I	mM7	♭9	11	♭13
IV	m7	9	♯11	♭13
V	7♭5	♭9	11	♭13

3. Harmonic minor ♭5				
I	mM7♭5	9	11	♭13
IV	m7	♭9	♯11	13

D4. Harmonic minor ♭2 ♭5				
I	mM7♭5	♭9	11	♭13
IV	m7	♭9	♯11	♭13

16 Heptatonic scales / 56 modes

A. Melodic major modes (14 modes)

A1. **Melodic major** (Diatonic major modes / Greek modes)

Name	Degr.	Chord	Scale														Tetrachords	
Ionian (Melodic major)	I	M7	1		2		3	4		5		6		7	1		2T½ Maj	2T½ Maj
Dorian	II	m7	1		2	♭3		4		5		6	♭7		1		2T½ Min	2T½ Min
Phrygian	III	m7	1	♭2		♭3		4		5	♭6		♭7		1		2T½ Phry	2T½ Phry
Lydian	IV	M7	1		2		3		♯4	5		6		7	1		3T Maj	2T½ Maj
Mixolydian	V	7	1		2		3	4		5		6	♭7		1		2T½ Maj	2T½ Min
Aeolian (Natural minor scale)	VI	m7	1		2	♭3		4		5	♭6		♭7		1		2T½ Min	2T½ Phry
Locrian	VII	m7♭5	1	♭2		♭3		4	♭5		♭6		♭7		1		2T½ Phry	3T Maj

I. Diatonic major scale - VI. Relative minor scale / Descending melodic minor scale

A2. Melodic major ♭2

Name	Degr.	Chord	Scale														Tetrachords	
Melodic major ♭2 (Ionian ♭2)	I	M7	1	♭2			3	4		5		6		7	1		2T½ Harm	2T½ Maj
Lydian ♭6	IV	M7	1		2		3		♯4	5	♭6			7	1		3T Maj	2T½ Harm
Mixolydian ♭5	V	7♭5	1		2		3	4	♭5			6	♭7		1		2T½ Maj	3T Aug1

A3. Melodic major ♭5

Name	Degr.	Chord	Scale														Tetrachords	
Melodic major ♭5 (Ionian ♭5)	I	M7♭5	1		2		3	4	♭5			6		7	1		2T½ Maj	3T Aug2
Lydian ♭2	IV	M7	1	♭2			3		♯4	5		6		7	1		3T Harm	2T½ Maj

A4. Melodic major ♭2 ♭5

Name	Degr.	Chord	Scale														Tetrachords	
Melodic major ♭2 ♭5	I	M7♭5	1	♭2			3	4	♭5			6		7	1		2T½ Harm	3T Aug2
Lydian ♭2 ♭6	IV	M7	1	♭2			3		♯4	5	♭6			7	1		3T Harm	2T½ Harm

I. Ionian ♭2 ♭5

16 Heptatonic scales / 56 modes

B. Harmonic major modes (14 modes)

B1. Harmonic major

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic major (Ionian ♭6)	I	M7	1		2		3	4		5	♭6			7	1	2T½ Maj	2T½ Harm
Dorian ♭5	II	m7♭5	1		2	♭3		4	♭5			6	♭7		1	2T½ Min	3T Aug1
Phrygian ♭4	III	m7 (7)	1	♭2		♭3	♭4			5	♭6		♭7		1	2T Phry	2T½ Phry
Lydian ♭3	IV	mM7	1		2	♭3			♯4	5		6		7	1	3T Min	2T½ Maj
Mixolydian ♭2	V	7	1	♭2			3	4		5		6	♭7		1	2T½ Harm	2T½ Min
Lydian ♯2 ♭5 (Aug. Aeolian)	♭VI	M7♯5	1			♯2	3		♯4		♯5	6		7	1	3T Aug1	2T Phry
Locrian ♭♭7	VII	dim7	1	♭2		♭3		4	♭5		♭6	♭♭7			1	2T½ Phry	3T Min

B2. Harmonic major ♭2 (Byzantine mode)

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic major ♭2 (Ionian ♭2 ♭6)	I	M7	1	♭2			3	4		5	♭6			7	1	2T½ Harm	2T½ Harm
Lydian ♭3 ♭6	IV	mM7	1		2	♭3			♯4	5	♭6			7	1	3T Min	2T½ Harm
Mixolydian ♭2 ♭5	V	7♭5	1	♭2			3	4	♭5			6	♭7		1	2T½ Harm	3T Aug1

I. Byzantine scale / Double harmonic major - IV. Hungarian / Gypsy minor / Double harmonic minor - V. Oriental scale

B3. Harmonic major ♭5

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic major ♭5 (Ionian ♭5 ♭6)	I	M7♭5	1		2		3	4	♭5		6			7	1	2T½ Maj	3T Maj+
Lydian ♭2 ♭3	IV	mM7	1	♭2		♭3			♯4	5		6		7	1	3T Phry	2T½ Maj

B4. Harmonic major ♭2 ♭5

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic major ♭2 ♭5	I	M7♭5	1	♭2			3	4	5♭		♭6			7	1	2T½ Harm	3T Maj+
Phrygian ♯4 ♮7	IV	mM7	1	♭2		♭3			♯4	5	♭6			7	1	3T Phry	2T½ Harm

I. Persian scale / Locrian ♮3 ♮7

16 Heptatonic scales / 56 modes

C. Melodic minor modes (14 modes)

C1. Melodic minor

Name	Degr.	Chord	Scale													Tetrachords	
Melodic minor (Ionian ♭3/Dorian ♮7)	I	mM7	1		2	♭3		4		5		6		7	1	2T½ Min	2T½ Maj
Dorian ♭2 (Phrygian ♮6)	II	m7	1	♭2		♭3		4		5		6	♭7		1	2T½ Phry	2T½ Min
Lydian ♯5 (Aug. Phrygian)	♭III	M7♯5	1		2		3		♯4		♯5	6		7	1	3T Maj	2T Phry
Lydian ♭7 (Mixolydian ♯4)	IV	7	1		2		3		♯4	5		6	♭7		1	3T Maj	2T½ Min
Mixolydian ♭6 (Aeolian ♮3)	V	7	1		2		3	4		5	♭6		♭7		1	2T½ Maj	2T½ Phry
Aeolian ♭5 (Locrian ♮2)	VI	m7♭5	1		2	♭3		4	♭5		♭6		♭7		1	2T½ Min	3T Maj
Locrian ♭4 (Dim. Ionian)	VII	m7♭5	1	♭2		♭3	♭4		♭5		♭6		♭7		1	2T Phry	3T Maj

I. Ascending melodic minor scale - II. Cappadocian scale - IV. Acoustic scale / Bartok - VII. Altered Scale / Superlocrian

C2. Melodic minor ♭2 (Neaopolitan major mode)

Name	Degr.	Chord	Scale													Tetrachords	
Melodic minor ♭2 (Ionian ♭2 ♭3)	I	mM7	1	♭2		♭3		4		5		6		7	1	2T½ Phry	2T½ Maj
Lydian ♭6 ♭7	IV	7	1		2		3		♯4	5	♭6		♭7		1	3T Maj	2T½ Phry
Mixolydian ♭5 ♭6	V	7♭5	1		2		3	4	♭5		♭6		♭7		1	2T½ Maj	3T Maj

I. Neapolitan major scale

C3. Melodic minor ♭5

Name	Degr.	Chord	Scale													Tetrachords	
Melodic minor ♭5 (Ionian ♭3 ♭5)	I	mM7♭5	1		2	♭3		4	♭5			6		7	1	2T½ Min	3T Aug2
Mixolydian ♭2 ♯4 (Lydian ♭2 ♭7)	IV	7	1	♭2			3		♯4	5		6	♭7		1	3T Harm	2T½ Min

C4. Melodic minor ♭2 ♭5

Name	Degr.	Chord	Scale													Tetrachords	
Melodic minor ♭2 ♭5 (Locrian ♮6 ♮7)	I	mM7♭5	1	♭2		♭3		4	♭5			6		7	1	2T½ Phry	3T Aug2
Phrygian ♮3 ♯4	IV	7	1	♭2			3		♯4	5	♭6		♭7		1	3T Harm	2T½ Phry

I. Persian scale

16 Heptatonic scales / 56 modes

D. Harmonic minor modes (14 modes)

D1. Harmonic minor

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic minor (Aeolian ♮7)	I	mM7	1		2	♭3		4		5	♭6			7	1	2T½ Min	2T½ Harm
Locrian ♮6	II	m7♭5	1	♭2		♭3		4	♭5			6	♭7		1	2T½ Phry	3T Aug1
Ionian ♯5	♭III	M7♯5	1		2		3	4			♯5	6		7	1	2T½ Maj	2T Phry
Dorian ♯4 (Ukrainian Dorian scale)	IV	m7	1		2	♭3			♯4	5		6	♭7		1	3T Min	2T½ Min
Phrygian ♮3	V	7	1	♭2			3	4		5	♭6		♭7		1	2T½ Harm	2T½ Phry
Lydian ♯2	♭VI	M7	1			♯2	3		♯4	5		6		7	1	3T Aug1	2T½ Maj
Locrian ♭4 ♭♭7 (Dim. Mixolydian)	VII	dim7	1	♭2		♭3	♭4		♭5		♭6	♭♭7			1	2T Phry	3T Min

I. Ionian ♭3 ♭6 - IV. Romanian scale - V. Phrygian dominant scale / Spanish Phrygian scale / Spanish Gypsy scale / Jewish scale

D2. Harmonic minor ♭2 (Neaopolitan minor mode)

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic minor ♭2 (Phrygian ♮7)	I	mM7	1	♭2		♭3		4		5	♭6			7	1	2T½ Phry	2T½ Harm
Aeolian ♯4	IV	m7	1		2	♭3			♯4	5	♭6		♭7		1	3T Min	2T½ Phry
Locrian ♮3	V	7♭5	1	♭2			3	4	♭5		♭6		♭7		1	2T½ Harm	3T Maj

I. Neapolitan minor scale - IV. Hungarian Gyspy scale

D3. Harmonic minor ♭5

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic minor ♭5 (Aeolian ♭5 ♮7)	I	mM7♭5	1		2	♭3		4	♭5		♭6			7	1	2T½ Min	3T Maj+
Dorian ♭2 ♯4 (Phrygian ♯4 ♮6)	IV	m7	1	♭2		♭3			♯4	5		6	♭7		1	3T Phry	2T½ Min

D4. Harmonic minor ♭2 ♭5

Name	Degr.	Chord	Scale													Tetrachords	
Harmonic minor ♭2 ♭5 (Locrian ♮7)	I	mM7♭5	1	♭2		♭3		4	♭5		♭6			7	1	2T½ Phry	3T Maj+
Phrygian ♯4	IV	m7	1	♭2		♭3			♯4	5	♭6		♭7		1	3T Phry	2T½ Phry

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Structure (1)

1	♭2	2	♯2 ♭3	3 ♭4	4	♯4 ♭5	5	♯5 ♭6	6 ♭♭7	♭7	7	1	Mode	Name	Tetrachords	
1	♭2	-	♭3	♭4	-	♭5	-	♭6	♭♭7	-	-	1	D1 / VII	**Locrian ♭4 ♭♭7** (Dim. Mixolydian)	2T Phry	3T Min
1	♭2	-	♭3	♭4	-	♭5	-	♭6	-	♭7	-	1	C1 / VII	**Locrian ♭4** (Dim. Ionian)	2T Phry	3T Maj
1	♭2	-	♭3	♭4	-	-	5	♭6	-	♭7	-	1	B1 / III	**Phrygian ♭4**	2T Phry	2T½ Phry
1	♭2	-	♭3	-	4	♭5	-	♭6	♭♭7	-	-	1	B1 / VII	**Locrian ♭♭7**	2T½ Phry	3T Min
1	♭2	-	♭3	-	4	♭5	-	♭6	-	♭7	-	1	A1 / VII	**Locrian**	2T½ Phry	3T Maj
1	♭2	-	♭3	-	4	♭5	-	♭6	-	-	7	1	D4 / I	**Harmonic minor ♭2 ♭5** (Locrian ♮7)	2T½ Phry	3T Maj+
1	♭2	-	♭3	-	4	♭5	-	-	6	♭7	-	1	D1 / II	**Locrian ♮6**	2T½ Phry	3T Aug1
1	♭2	-	♭3	-	4	♭5	-	-	6	-	7	1	C4 / I	**Melodic minor ♭2 ♭5** (Locrian ♮6 ♮7)	2T½ Phry	3T Aug2
1	♭2	-	♭3	-	4	-	5	♭6	-	♭7	-	1	A1 / III	**Phrygian**	2T½ Phry	2T½ Phry
1	♭2	-	♭3	-	4	-	5	♭6	-	-	7	1	D2 / I	**Harmonic minor ♭2** (Phrygian ♮7)	2T½ Phry	2T½ Harm
1	♭2	-	♭3	-	4	-	5	-	6	♭7	-	1	C1 / II	**Dorian ♭2** (Phrygian ♮6)	2T½ Phry	2T½ Min
1	♭2	-	♭3	-	4	-	5	-	6	-	7	1	C2 / I	**Melodic minor ♭2** (Ionian ♭2 ♭3)	2T½ Phry	2T½ Maj
1	♭2	-	♭3	-	-	♯4	5	♭6	-	♭7	-	1	D4 / IV	**Phrygian ♯4**	3T Phry	2T½ Phry
1	♭2	-	♭3	-	-	♯4	5	♭6	-	-	7	1	B4 / IV	**Phrygian ♯4 ♮7**	3T Phry	2T½ Harm
1	♭2	-	♭3	-	-	♯4	5	-	6	♭7	-	1	D3 / IV	**Dorian ♭2 ♯4** (Phrygian ♯4 ♮6)	3T Phry	2T½ Min
1	♭2	-	♭3	-	-	♯4	5	-	6	-	7	1	B3 / IV	**Lydian ♭2 ♭3**	3T Phry	2T½ Maj
1	♭2	-	-	3	4	♭5	-	♭6	-	♭7	-	1	D2 / V	**Locrian ♮3**	2T½ Harm	3T Maj
1	♭2	-	-	3	4	♭5	-	♭6	-	-	7	1	B4 / I	**Harmonic major ♭2 ♭5** (Locrian ♮3 ♮7)	2T½ Harm	3T Maj+
1	♭2	-	-	3	4	♭5	-	-	6	♭7	-	1	B2 / V	**Mixolydian ♭2 ♭5**	2T½ Harm	3T Aug1
1	♭2	-	-	3	4	♭5	-	-	6	-	7	1	A4 / I	**Melodic major ♭2 ♭5** (Ionian ♭2 ♭5)	2T½ Harm	3T Aug2
1	♭2	-	-	3	4	-	5	♭6	-	♭7	-	1	D1 / V	**Phrygian ♮3**	2T½ Harm	2T½ Phry
1	♭2	-	-	3	4	-	5	♭6	-	-	7	1	B2 / I	**Harmonic major ♭2** (Ionian ♭2 ♭6)	2T½ Harm	2T½ Harm
1	♭2	-	-	3	4	-	5	-	6	♭7	-	1	B1 / V	**Myxolydian ♭2**	2T½ Harm	2T½ Min
1	♭2	-	-	3	4	-	5	-	6	-	7	1	A2 / I	**Melodic major ♭2** (Ionian ♭2)	2T½ Harm	2T½ Maj
1	♭2	-	-	3	-	♯4	5	♭6	-	♭7	-	1	C4 / IV	**Phrygian ♮3 ♯4**	3T Harm	2T½ Phry
1	♭2	-	-	3	-	♯4	5	♭6	-	-	7	1	A4 / IV	**Lydian ♭2 ♭6**	3T Harm	2T½ Harm
1	♭2	-	-	3	-	♯4	5	-	6	♭7	-	1	C3 / IV	**Mixolydian ♭2 ♯4** (Lydian ♭2 ♭7)	3T Harm	2T½ Min
1	♭2	-	-	3	-	♯4	5	-	6	-	7	1	A3 / IV	**Lydian ♭2**	3T Harm	2T½ Maj

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Structure (2)

1	♭2	2	♯2 ♭3	3 ♭4	4	♯4 ♭5	5	♯5 ♭6	6 ♭♭7	♭7	7	1	Mode	Name	Tetrachords	
1	-	2	♭3	-	4	♭5	-	♭6	-	♭7	-	1	C1 / VI	**Aeolian ♭5** (Locrian ♮2)	2T½ Min	3T Maj
1	-	2	♭3	-	4	♭5	-	♭6	-	-	7	1	D3 / I	**Harmonic minor ♭5** (Aeolian ♭5 ♮7)	2T½ Min	3T Maj+
1	-	2	♭3	-	4	♭5	-	-	6	♭7	-	1	B1 / II	**Dorian ♭5**	2T½ Min	3T Aug1
1	-	2	♭3	-	4	♭5	-	-	6	-	7	1	C3 / I	**Melodic minor ♭5** (Ionian ♭3 ♭5)	2T½ Min	3T Aug2
1	-	2	♭3	-	4	-	5	♭6	-	♭7	-	1	A1 / VI	**Aeolian**	2T½ Min	2T½ Phry
1	-	2	♭3	-	4	-	5	♭6	-	-	7	1	D1 / I	**Harmonic minor** (Aeolian ♮7)	2T½ Min	2T½ Harm
1	-	2	♭3	-	4	-	5	-	6	♭7	-	1	A1 / II	**Dorian**	2T½ Min	2T½ Min
1	-	2	♭3	-	4	-	5	-	6	-	7	1	C1 / I	**Melodic minor** (Ionian ♭3 / Dorian ♮7)	2T½ Min	2T½ Maj
1	-	2	♭3	-	-	♯4	5	♭6	-	♭7	-	1	D2 / IV	**Aeolian ♯4**	3T Min	2T½ Phry
1	-	2	♭3	-	-	♯4	5	♭6	-	-	7	1	B2 / IV	**Lydian ♭3 ♭6**	3T Min	2T½ Harm
1	-	2	♭3	-	-	♯4	5	-	6	♭7	-	1	D1 / IV	**Dorian ♯4**	3T Min	2T½ Min
1	-	2	♭3	-	-	♯4	5	-	6	-	7	1	B1 / IV	**Lydian ♭3**	3T Min	2T½ Maj
1	-	2	-	3	4	♭5	-	♭6	-	♭7	-	1	C2 / V	**Mixolydian ♭5 ♭6**	2T½ Maj	3T Maj
1	-	2	-	3	4	♭5	-	♭6	-	-	7	1	B3 / I	**Harmonic major ♭5** (Ionian ♭5 ♭6)	2T½ Maj	3T Maj+
1	-	2	-	3	4	♭5	-	-	6	♭7	-	1	A2 / V	**Mixolydian ♭5**	2T½ Maj	3T Aug1
1	-	2	-	3	4	♭5	-	-	6	-	7	1	A3 / I	**Melodic major ♭5** (Ionian ♭5)	2T½ Maj	3T Aug2
1	-	2	-	3	4	-	5	♭6	-	♭7	-	1	C1 / V	**Mixolydian ♭6** (Aeolian ♮3)	2T½ Maj	2T½ Phry
1	-	2	-	3	4	-	5	♭6	-	-	7	1	B1 / I	**Harmonic major** (Ionian ♭6)	2T½ Maj	2T½ Harm
1	-	2	-	3	4	-	5	-	6	♭7	-	1	A1 / V	**Mixolydian**	2T½ Maj	2T½ Min
1	-	2	-	3	4	-	5	-	6	-	7	1	A1 / I	**Ionian**	2T½ Maj	2T½ Maj
1	-	2	-	3	4	-	-	♯5	6	-	7	1	D1 / ♭III	**Ionian ♯5**	2T½ Maj	2T Phry
1	-	2	-	3	-	♯4	5	♭6	-	♭7	-	1	C2 / IV	**Lydian ♭6 ♭7**	3T Maj	2T½ Phry
1	-	2	-	3	-	♯4	5	♭6	-	-	7	1	A2 / IV	**Lydian ♭6**	3T Maj	2T½ Harm
1	-	2	-	3	-	♯4	5	-	6	♭7	-	1	C1 / IV	**Lydian ♭7** (Mixolydian ♯4)	3T Maj	2T½ Min
1	-	2	-	3	-	♯4	5	-	6	-	7	1	A1 / IV	**Lydian**	3T Maj	2T½ Maj
1	-	2	-	3	-	♯4	-	♯5	6	-	7	1	C1 / ♭III	**Lydian ♯5** (Aug. Phrygian)	3T Maj	2T Phry
1	-	-	♯2	3	-	♯4	5	-	6	-	7	1	D1 / ♭VI	**Lydian ♯2**	3T Aug1	2T½ Maj
1	-	-	♯2	3	-	♯4	-	♯5	6	-	7	1	B1 / ♭VI	**Lydian ♯2 ♭5** (Aug. Aeolian)	3T Aug1	2T Phry

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Altered greek modes scales (1)

Greek modes

Degree	Mode	Equivalences
I	Ionian	Lydian ♮4 - Mixolydian ♮7
II	Dorian	Mixolydian ♭3 - Aeolian ♮6
III	Phrygian	Aeolian ♭2 - Locrian ♮5
IV	Lydian	Ionian ♯4 - Aug. Locrian
V	Mixolydian	Ionian ♮7 - Dorian ♮3
VI	Aeolian	Dorian ♭6 - Phrygian ♮2
VII	Locrian	Phrygian ♭5 - Dim. Lydian

I. Ionian

Alt.	Resulting scale	Mode
♭2	**Melodic major ♭2** (Ionian ♭2)	A2 / I
♭2 ♭3	**Melodic minor ♭2** (Ionian ♭2 ♭3)	C2 / I
♭2 ♯4	**Lydian ♭2**	A3 / IV
♭2 ♭5	**Melodic major ♭2 ♭5** (Ionian ♭2 ♭5)	A4 / I
♭2 ♭6	**Harmonic major ♭2** (Ionian ♭2 ♭6)	B2 / I
♭2 ♭7	**Mixolydian ♭2** (Ionian ♭2 ♭7)	B1 / V
♭3	**Melodic minor** (Ionian ♭3)	C1 / I
♭3 ♭5	**Melodic minor ♭5** (Ionian ♭3 ♭5)	C3 / I
♭3 ♭6	**Harmonic minor** (Ionian ♭3 ♭6)	D1 / I
♭3 ♭7	**Dorian**	A1 / II
♯4	**Lydian**	A1 / IV
♯4 ♯5	**Lydian ♯5** (Aug. Phrygian)	C1 / ♭III
♯4 ♭6	**Lydian ♭6** (Harmonic major ♯4)	A2 / IV
♯4 ♭7	**Lydian ♭7** (Mixolydian ♯4)	C1 / IV
♭5	**Melodic major ♭5** (Ionian ♭5)	A3 / I
♭5 ♭6	**Harmonic major ♭5** (Ionian ♭5 ♭6)	B3 / I
♭5 ♭7	**Mixolydian ♭5**	A2 / V
♯5	**Ionian ♯5**	D1 / ♭III
♭6	**Harmonic major** (Ionian ♭6)	B1 / I
♭6 ♭7	**Mixolydian ♭6**	C1 / V
♭7	**Mixolydian**	A1 / V

II. Dorian

Alt.	Resulting scale	Mode
♭2	**Dorian ♭2** (Phrygian ♮6)	C1 / II
♭2 ♮3	**Mixolydian ♭2** (Ionian ♭2 ♭7)	B1 / V
♭2 ♯4	**Dorian ♭2 ♯4** (Phrygian ♯4 ♮6)	D3 / IV
♭2 ♭5	**Locrian ♮6** (Dorian ♭2 ♭5)	D1 / II
♭2 ♭6	**Phrygian**	A1 / III
♮3	**Mixolydian**	A1 / V
♮3 ♮7	**Ionian**	A1 / I
♯4	**Dorian ♯4** (Ukrainian Dorian scale)	D1 / IV
♭5	**Dorian ♭5**	B1 / II
♭6	**Aeolian**	A1 / VI
♭6 ♮7	**Harmonic minor**	D1 / I
♮7	**Melodic minor**	C1 / I

III. Phrygian

Alt.	Resulting scale	Mode
♮2	**Aeolian**	A1 / VI
♮3	**Phrygian ♮3** (Spanish/Jewish scale)	D1 / V
♮3 ♯4	**Phrygian ♮3 ♯4**	C4 / IV
♭4	**Phrygian ♭4**	B1 / III
♯4	**Phrygian ♯4**	D4 / IV
♯4 ♮6	**Dorian ♭2 ♯4** (Phrygian ♯4 ♮6)	D3 / IV
♯4 ♮7	**Phrygian ♯4 ♮7**	B4 / IV
♭5	**Locrian**	A1 / VII
♮6	**Dorian ♭2** (Phrygian ♮6)	C1 / II
♮7	**Harmonic minor ♭2** (Neapolitan min.)	D2 / I

16 Heptatonic scales / 56 modes

Altered greek modes scales (2)

IV. Lydian

Alt.	Resulting scale	Mode
♭2	**Lydian ♭2** (Ionian ♭2 ♯4)	A3 / IV
♭2 ♭3	**Lydian ♭2 ♭3**	B3 / IV
♭2 ♭6	**Lydian ♭2 ♭6**	A4 / IV
♭2 ♭7	**Mixolydian ♭2 ♯4** (Lydian ♭2 ♭7)	C3 / IV
♯2	**Lydian ♯2** (Ionian ♯2 ♯4)	D1 / ♭VI
♭3	**Lydian ♭3** (Melodic minor ♯4)	B1 / IV
♭3 ♭6	**Lydian ♭3 ♭6** (Harmonic Minor ♯4)	B2 / IV
♭3 ♭7	**Dorian ♯4** (Lydian ♭3 ♭7)	D1 / IV
♮4	**Ionian**	A1 / I
♯5	**Lydian ♯5**	C1 / ♭III
♭6	**Lydian ♭6** (Melodic major ♯4)	A2 / IV
♭6 ♭7	**Lydian ♭6 ♭7** (Mixolydian ♯4 ♭6)	C2 / IV
♭7	**Lydian ♭7** (Mixolydian ♯4)	C1 / IV

V. Mixolydian

Alt.	Resulting scale	Mode
♭2	**Mixolydian ♭2** (Ionian ♭2 ♭7)	B1 / V
♭2 ♯4	**Mixolydian ♭2 ♯4** (Lydian ♭2 ♭7)	C3 / IV
♭2 ♭5	**Mixolydian ♭2 ♭5**	B2 / V
♭2 ♭6	**Phrygian ♮3** (Spanish/Jewish scale)	D1 / V
♭3	**Dorian**	A1 / II
♭3 ♭5	**Dorian ♭5**	B1 / II
♭3 ♭6	**Aeolian**	A1 / VI
♭3 ♮7	**Melodic minor**	C1 / I
♯4	**Lydian ♭7** (Mixolydian ♯4)	C1 / IV
♯4 ♭6	**Lydian ♭6 ♭7** (Mixolydian ♯4 ♭6)	C2 / IV
♯4 ♮7	**Lydian**	A1 / IV
♭5	**Mixolydian ♭5**	A2 / V
♭5 ♭6	**Mixolydian ♭5 ♭6** (Aeolian ♮3 ♭5)	C2 / V
♭5 ♮7	**Melodic major ♭5** (Ionian ♭5)	A3 / I
♭6	**Mixolydian ♭6** (Aeolian ♮3)	C1 / V
♭6 ♮7	**Harmonic major** (Ionian ♭6)	B1 / I
♮7	**Ionian**	A1 / I

VI. Aeolian

Alt.	Resulting scale	Mode
♭2	**Phrygian**	A1 / III
♭2 ♮3	**Phrygian ♮3** (Spanish/Jewish scale)	D1 / V
♭2 ♯4	**Phrygian ♯4**	D4 / IV
♭2 ♭5	**Locrian**	A1 / VII
♮3	**Mixolydian ♭6** (Aeolian ♮3)	C1 / V
♮3 ♯4	**Lydian ♭6 ♭7** (Mixolydian ♯4 ♭6)	C2 / IV
♮3 ♭5	**Mixolydian ♭5 ♭6** (Aeolian ♮3 ♭5)	C2 / V
♮3 ♮6	**Mixolydian**	A1 / V
♮3 ♮7	**Harmonic major** (Ionian ♭6)	B1 / I
♯4	**Aeolian ♯4** (Hungarian Gyspy scale)	D2 / IV
♭5	**Aeolian ♭5** (Locrian ♮2)	C1 / VI
♭5 ♮7	**Harmonic minor ♭5** (Aeolian ♭5 ♮7)	D3 / I
♮6	**Dorian**	A1 / II
♮6 ♮7	**Melodic minor**	C1 / I
♮7	**Harmonic minor**	D1 / I

VII. Locrian

Alt.	Resulting scale	Mode
♮2	**Aeolian ♭5** (Locrian ♮2)	C1 / VI
♮2 ♮7	**Harmonic minor ♭5** (Aeolian ♭5 ♮7)	D3 / I
♮3	**Locrian ♮3**	D2 / V
♮3 ♮7	**Harmonic major ♭2 ♭5** (Locrian ♮3 ♮7)	B4 / I
♭4	**Locrian ♭4** (Superlocrian)	C1 / VII
♭4 ♭♭7	**Locrian ♭4 ♭♭7** (Dim. Mixolydian)	D1 / VII
♮5	**Phrygian**	A1 / III
♮6	**Locrian ♮6** (Dorian ♭2 ♭5)	D1 / II
♮6 ♮7	**Melodic minor ♭2 ♭5**	C4 / I
♭♭7	**Locrian ♭♭7**	B1 / VII
♮7	**Harmonic minor ♭2 ♭5**	D4 / I

Intervals

R	m2	M2 d3	A2 m3	M3 d4	A3 P4	A4 d5	P5 d6	A5 m6	M6 d7	A6 m7	M7	R

1	♭2	2 ♭♭3	♯2 ♭3	3 ♭4	♯3 4	♯4 ♭5	5 ♭♭6	♯5 ♭6	6 ♭♭7	♯6 ♭7	7	1

			♯2		♯3	♯4		♯5		♯6		
1		2		3	4		5		6		7	1
	♭2		♭3	♭4		♭5		♭6		♭7		
		♭♭3					♭♭6		♭♭7			
	♭9	9	♯9		11	♯11		♭13	13			

Complementary Intervals												
	♭2		2		♭3		3		4		♯4	
	7		♭7		6		♭6		5		♭5	

Intervals / Voicings

I	1	♭2	2	♭3	3	4	♯4 ♭5	5	♯5 ♭6	6	♭7	7	1	I

I	1	♭2	2	♭3	3	4	♯4	5	♯5	6	♭7	7	1	I
♭II	♭2	2	♭3	3	4	♯4	5	♯5	6	♭7	7	1	♭2	♭II
II	2	♭3	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	II
♭III	♭3	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♭3	♭III
III	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♭3	3	III
IV	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♭3	3	4	IV
♯IV	♯4	5	♯5	6	♭7	7	1	♭2	2	♭3	3	4	♯4	♯IV

♭V	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	3	4	♭5	♭V
V	5	♭6	6	♭7	7	1	♭2	2	♭3	3	4	♭5	5	V
♭VI	♭6	6	♭7	7	1	♭2	2	♭3	3	4	♭5	5	♭6	♭VI
VI	6	♭7	7	1	♭2	2	♭3	3	4	♭5	5	♭6	6	VI
♭VII	♭7	7	1	♭2	2	♭3	3	4	♭5	5	♭6	6	♭7	♭VII
VII	7	1	♭2	2	♭3	3	4	♭5	5	♭6	6	♭7	7	VII
I	1	♭2	2	♭3	3	4	♭5	5	♭6	6	♭7	7	1	I

Intervals - Major Keys

Major Keys	C	C♯ D♭	D	D♯ E♭	E	F	F♯ G♭	G	G♯ A♭	A	A♯ B♭	B	C	Major Keys
C	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	I
G	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	V
D	♭7	7	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	II
A	♯2	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	VI
E	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♯4	5	♯5	III
B	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	♭2	VII
F♯	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♯4	♯IV
G♭	♭5	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♭5	♭V
D♭	7	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	♭II
A♭	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	3	♭VI
E♭	6	♭7	7	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭III
B♭	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♭VII
F	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♯4	5	IV
C	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	I

Intervals - Minor Keys

Minor Keys	A	A♯ B♭	B	C	C♯ D♭	D	D♯ E♭	E	F	F♯ G♭	G	G♯ A♭	A	Minor Keys
A	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	I
E	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	V
B	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	II
F♯	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	VI
C♯	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	III
G♯	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	VII
D♯	♯4	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♯4	♯IV
E♭	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	♭V
B♭	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	♭II
F	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	♭VI
C	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭III
G	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭VII
D	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	IV
A	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	I

Intervals / Scales harmonization

Major Keys	1	♭2	2	♯2	3	4	♯4 ♭5	5	♯5 ♭6	6	♭7	7	1	Major Keys
I	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	I
♭II	7	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	♭II
II	♭7	7	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	II
♭III	6	♭7	7	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭III
III	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♯4	5	♯5	III
IV	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♯4	5	IV
♯IV	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♯4	♯IV
♭V	♭5	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	♭5	♭V
V	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	3	4	V
♭VI	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	3	♭VI
VI	♯2	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♯2	VI
♭VII	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	♭2	2	♭VII
VII	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	♭2	VII
I	1	♭2	2	♯2	3	4	♯4	5	♯5	6	♭7	7	1	I

Intervals / Scales harmonization

Minor Keys	1	♭2	2	♭3	3 ♭4	4	♯4 ♭5	5	♯5 ♭6	6	♭7	7	1	Minor Keys
I	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	I
♭II	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	♭II
II	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	II
♭III	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭III
III	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	♭6	III
IV	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	5	IV
♯IV	♯4	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♯4	♯IV
♭V	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	♭5	♭V
V	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	4	V
♭VI	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	♭4	♭VI
VI	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭3	VI
♭VII	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	2	♭VII
VII	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	♭2	VII
I	1	♭2	2	♭3	♭4	4	♭5	5	♭6	6	♭7	7	1	I

Scales hamonization - Melodic major (Diatonic major modes)

	1	-	2	-	3	4	-	5	-	6	-	7	1	
I	1	-	2	-	3	4	-	5	-	6	-	7	1	I
II	♭7	-	1	-	2	♭3	-	4	-	5	-	6	♭7	II
III	♭6	-	♭7	-	1	♭2	-	♭3	-	4	-	5	♭6	III
IV	5	-	6	-	7	1	-	2	-	3	-	♯4	5	IV
V	4	-	5	-	6	♭7	-	1	-	2	-	3	4	V
VI	♭3	-	4	-	5	♭6	-	♭7	-	1	-	2	♭3	VI
VII	♭2	-	♭3	-	4	♭5	-	♭6	-	♭7	-	1	♭2	VII

Scales hamonization - Harmonic major

	1	-	2	-	3	4	-	5	♭6	-	-	7	1	
I	1	-	2	-	3	4	-	5	♭6	-	-	7	1	I
II	♭7	-	1	-	2	♭3	-	4	♭5	-	-	6	♭7	II
III	♭6	-	♭7	-	1	♭2	-	♭3	♭4	-	-	5	♭6	III
IV	5	-	6	-	7	1	-	2	♭3	-	-	♯4	5	IV
V	4	-	5	-	6	♭7	-	1	♭2	-	-	3	4	V
♭VI	3	-	♯4	-	♯5	6	-	7	1	-	-	♯2	3	♭VI
VII	♭2	-	♭3	-	4	♭5	-	♭6	♭♭7	-	-	1	♭2	VII

Scales hamonization - Melodic minor

	1	-	2	♭3	-	4	-	5	-	6	-	7	1	
I	1	-	2	♭3	-	4	-	5	-	6	-	7	1	I
II	♭7	-	1	♭2	-	♭3	-	4	-	5	-	6	♭7	II
♭III	6	-	7	1	-	2	-	3	-	♯4	-	♯5	6	♭III
IV	5	-	6	♭7	-	1	-	2	-	3	-	♯4	5	IV
V	4	-	5	♭6	-	♭7	-	1	-	2	-	3	4	V
VI	♭3	-	4	♭5	-	♭6	-	♭7	-	1	-	2	♭3	VI
VII	♭2	-	♭3	♭4	-	♭5	-	♭6	-	♭7	-	1	♭2	VII

Scales hamonization - Harmonic minor

	1	-	2	♭3	-	4	-	5	♭6	-	-	7	1	
I	1	-	2	♭3	-	4	-	5	♭6	-	-	7	1	I
II	♭7	-	1	♭2	-	♭3	-	4	♭5	-	-	6	♭7	II
♭III	6	-	7	1	-	2	-	3	4	-	-	♯5	6	♭III
IV	5	-	6	♭7	-	1	-	2	♭3	-	-	♯4	5	IV
V	4	-	5	♭6	-	♭7	-	1	♭2	-	-	3	4	V
♭VI	3	-	♯4	5	-	♭7	-	7	1	-	-	♯2	3	♭VI
VII	♭2	-	♭3	♭4	-	♭5	-	♭6	♭♭7	-	-	1	♭2	VII

Major Keys

Major Keys	1	2	3	4	5	6	7	Minor Keys	Sharps & Flats
C	C	D	E	F	G	A	B	A	-
G	G	A	B	C	D	E	F♯	E	♯
D	D	E	F♯	G	A	B	C♯	B	♯♯
A	A	B	C♯	D	E	F♯	G♯	F♯	♯♯♯
E	E	F♯	G♯	A	B	C♯	D♯	C♯	♯♯♯♯
B	B	C♯	D♯	E	F♯	G♯	A♯	G♯	♯♯♯♯♯
F♯	F♯	G♯	A♯	B	C♯	D♯	E♯	D♯	♯♯♯♯♯♯
G♭	G♭	A♭	B♭	C♭	D♭	E♭	F	E♭	♭♭♭♭♭♭
D♭	D♭	E♭	F	G♭	A♭	B♭	C	B♭	♭♭♭♭♭
A♭	A♭	B♭	C	D♭	E♭	F	G♯	F	♭♭♭♭
E♭	E♭	F	G	A♭	B♭	C	D	C	♭♭♭
B♭	B♭	C	D	E♭	F	G	A	G	♭♭
F	F	G	A	B♭	C	D	E	D	♭
C	C	D	E	F	G	A	B	A	-

Minor Keys

Minor Keys	1	2	♭3	4	5	♭6	♭7	Major Keys	Sharps & Flats
A	A	B	C	D	E	F	G	C	-
E	E	F♯	G	A	B	C	D	G	♯
B	B	C♯	D	E	F♯	G	A	D	♯♯
F♯	F♯	G♯	A	B	C♯	D	E	A	♯♯♯
C♯	C♯	D♯	E	F♯	G♯	A	B	E	♯♯♯♯
G♯	G♯	A♯	B	C♯	D♯	E	F♯	B	♯♯♯♯
D♯	D♯	E♯	F♯	G♯	A♯	B	C♯	F♯	♯♯♯♯♯
E♭	E♭	F	G♭	A♭	B♭	C♭	D♭	G♭	♭♭♭♭♭♭
B♭	B♭	C	D♭	E♭	F	G♭	A♭	D♭	♭♭♭♭♭
F	F	G	A♭	B♭	C	D♭	E♭	A♭	♭♭♭♭
C	C	D	E♭	F	G	A♭	B♭	E♭	♭♭♭
G	G	A	B♭	C	D	E♭	F	B♭	♭♭
D	D	E	F	G	A	B♭	C	F	♭
A	A	B	C	D	E	F	G	C	-

Circle of Fifths / Forths

⇨ I V II VI III VII ♯IV | ♭V ♭II ♭VI ♭III ♭VII IV I ⇦

Major Keys : Degrees / Intervals

Major Keys	I 1	♭II ♭2	II 2	♯II ♯2	III 3	IV 4	♯IV ♯4	♭V ♭5	V 5	♯V ♯5	♭VI ♭6	VI 6	♭VII ♭7	VII 7	Major Keys
C	C	D♭	D	D♯	E	F	F♯	G♭	G	G♯	A♭	A	B♭	B	C
G	G	A♭	A	A♯	B	C	C♯	D♭	D	D♯	E♭	E	F	F♯	G
D	D	E♭	E	E♯	F♯	G	G♯	A♭	A	A♯	B♭	B	C	C♯	D
A	A	B♭	B	B♯	C♯	D	D♯	E♭	E	E♯	F	F♯	G	G♯	A
E	E	F	F♯	F𝄪	G♯	A	A♯	B♭	B	B♯	C	C♯	D	D♯	E
B	B	C	C♯	C𝄪	D♯	E	E♯	F♮	F♯	F𝄪	G	G♯	A	A♯	B
F♯	F♯	G	G♯	G𝄪	A♯	B	B♯	C♮	C♯	C𝄪	D	D♯	E	E♯	F♯
G♭	G♭	A♭♭	A♭	A	B♭	C♭	C	D♭♭	D♭	D	E♭♭	E♭	F♭	F	G♭
D♭	D♭	E♭♭	E♭	E	F	G♭	G	A♭♭	A♭	A	B♭♭	B♭	C♭	C	D♭
A♭	A♭	B♭♭	B♭	B	C	D♭	D	E♭♭	E♭	E	F♭	F	G♭	G♯	A♭
E♭	E♭	F♭	F	F♯	G	A♭	A	B♭♭	B♭	B	C♭	C	D♭	D	E♭
B♭	B♭	C♭	C	C♯	D	E♭	E	F♭	F	F♯	G♭	G	A♭	A	B♭
F	F	G♭	G	G♯	A	B♭	B	C♭	C	C♯	D♭	D	E♭	E	F
C	C	D♭	D	D♯	E	F	F♯	G♭	G	G♯	A♭	A	B♭	B	C

Minor Keys : Degrees / Intervals

Minor Keys	I 1	♭II ♭2	II 2	♭III ♭3	♭IV ♭4	IV 4	♯IV ♯4	♭V ♭5	V 5	♯V ♯5	♭VI ♭6	VI 6	♭VII ♭7	VII 7	Minor Keys
A	A	B♭	B	C	D♭	D	D♯	E♭	E	E♯	F	F♯	G	G♯	A
E	E	F	F♯	G	A♭	A	A♯	B♭	B	B♯	C	C♯	D	D♯	E
B	B	C	C♯	D	E♭	E	E♯	F♮	F♯	F𝄪	G	G♯	A	A♯	B
F♯	F♯	G	G♯	A	B♭	B	B♯	C♮	C♯	C𝄪	D	D♯	E	E♯	F♯
C♯	C♯	D	D♯	E	F♮	F♯	F𝄪	G♮	G♯	G𝄪	A	A♯	B	B♯	C♯
G♯	G♯	A	A♯	B	C♮	C♯	C𝄪	D♮	D♯	D𝄪	E	E♯	F♯	F𝄪	G♯
D♯	D♯	E	E♯	F♯	G♮	G♯	G𝄪	A♮	A♯	A𝄪	B	B♯	C♯	C𝄪	D♯
E♭	E♭	F♭	F	G♭	A♭♭	A♭	A	B♭♭	B♭	B	C♭	C	D♭	D	E♭
B♭	B♭	C♭	C	D♭	E♭♭	E♭	E	F♭	F	F♯	G♭	G	A♭	A	B♭
F	F	G♭	G	A♭	B♭♭	B♭	B	C♭	C	C♯	D♭	D	E♭	E	F
C	C	D♭	D	E♭	F♭	F	F♯	G♭	G	G♯	A♭	A	B♭	B	C
G	G	A♭	A	B♭	C♭	C	C♯	D♭	D	D♯	E♭	E	F	F♯	G
D	D	E♭	E	F	G♭	G	G♯	A♭	A	A♯	B♭	B	C	C♯	D
A	A	B♭	B	C	D♭	D	D♯	E♭	E	E♯	F	F♯	G	G♯	A

Circle of Fifths / Forths

⇨ I V II VI III VII ♯IV | ♭V ♭II ♭VI ♭III ♭VII IV I ⇦

Tonal chord progressions (Circle of Fifths)

Major keys Minor keys	VII II	III V	VI I	II IV	V ♭VII	I ♭III	IV ♭VI	Sharps & Flats
C Maj / A min	B	E	A	D	G	C	F	-
G Maj / E min	F♯	B	E	A	D	G	C	♯
D Maj / B min	C♯	F♯	B	E	A	D	G	♯♯
A Maj / F♯ min	G♯	C♯	F♯	B	E	A	D	♯♯♯
E Maj / C♯ min	D♯	G♯	C♯	F♯	B	E	A	♯♯♯♯
B Maj / G♯ min	A♯	D♯	G♯	C♯	F♯	B	E	♯♯♯♯♯
F♯ Maj / D♯ min	E♯	A♯	D♯	G♯	C♯	F♯	B	♯♯♯♯♯♯
G♭ Maj / E♭ min	F	B♭	E♭	A♭	D♭	G♭	C♭	♭♭♭♭♭♭
D♭ Maj / B♭ min	C	F	B♭	E♭	A♭	D♭	G♭	♭♭♭♭♭
A♭ Maj / F min	G	C	F	B♭	E♭	A♭	D♭	♭♭♭♭
E♭ Maj / C min	D	G	C	F	B♭	E♭	A♭	♭♭♭
B♭ Maj / G min	A	D	G	C	F	B♭	E♭	♭♭
F Maj / D min	E	A	D	G	C	F	B♭	♭
C Maj / A min	B	E	A	D	G	C	F	-

Modal chord progressions (Circle of Fifths)

Melodic major (Diatonic major scale)							
Degrees	VII	III	VI	II	V	I	IV
Chords	m7♭5	m7	m7	m7	7	M7	M7
Harmonic major							
Degrees	-	-	-	II	V	I	IV
Chords				m7♭5	7	M7	mM7
Melodic minor							
Degrees	-	-	VI	II	V	I	IV
Chords			m7♭5	m7	7	mM7	7
Harmonic minor							
Degrees	-	-	-	II	V	I	IV
Chords				m7♭5	7	mM7	m7
Melodic major ♭2							
Degrees	-	-	-	-	V	I	IV
Chords					7♭5	M7	M7
Harmonic major ♭2 (Byzantine Mode)							
Degrees	-	-	-	-	V	I	IV
Chords					7♭5	M7	mM7
Melodic minor ♭2 (Neapolitan major mode)							
Degrees	-	-	-	-	V	I	IV
Chords					7♭5	mM7	7
Harmonic minor ♭2 (Neapolitan minor mode)							
Degrees	-	-	-	-	V	I	IV
Chords					7♭5	mM7	m7